

### About Conference

2 Days International Conference on Recent Innovations in Science, Engineering, Humanities and Management (SEHM-2021) is a global event organised by Conference World at (IEI, Chandigarh) Institution of Engineers, India, Sector 19A, Chandigarh conducted through Google meet. This conference provides an international forum for researchers, developers, engineers and practitioners who are involved in real time projects that provide solutions to exchange their valuable ideas and showcase the ongoing works which may lead to path breaking foundation of the futuristic engineering. It accentuates indispensability of interdisciplinary and cross – linked thinking with respect of innovation and market opportunities. All the accepted paper will be published in International Journal with ISSN Approved by UGC. Selected papers will be published in Scopus Index Journals..

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**(SEHM-2021)**

### 2 Days International Conference on Recent Innovations in Science, Engineering, Humanities and Management

#### Venue:

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Sector 19A, Chandigarh

**16<sup>th</sup> - 17<sup>th</sup> January 2021**

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Dr. A.K Sharma

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## HUMAN RESOURCE ANALYTICS

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### Abstract:

Human resource analytics ( also known as people analytics) .It is currently on peak of trend, With Human resource data being used everywhere this field is set to grow rapidly. In today data driven dynamic work environment HR analytics is an absolute necessity for a business To lead successful. HR analytics ,the modern data analysis method have become essential part Of employees engagement that helps the company to have a better understanding of their employees needs and motivate them. HR analytics develop data-driven insights to inform talent decisions, improve workforce processes and promote positive employee experience. Human resource analytics will collect and analyze HR data and statistics and apply this data to make recommendations related to recruitment, keeping of employees, and legal compliance .this paper tries to achieve 3 main objective 1.what is HR analytics means and it's importance 2. What are the process involved in HR analytics 3.what are the uses of HR Analytics. Also this paper will provide deep information about the information related to HR analytics like definition, types, tools, benefits ..etc

### Introduction

HR analytics is essential part of the organization that process the gathered information and use accurate data to improve the overall usability of employees and it is a data-driven approach to managing the employee at work place. HR analytics, also known as people analytics, workforce analytics and talent analytics . which go around analyzing people problem using data to answer critical questions about the organization, this enables us to make great data-driven decision Making .

### Definition

Human Resource analytics (HR Analytics) is defined as the area in the field of analytics that deals with people analysis and applying analytical process to the human capital within the organization to improve employee performance and improving employee retention.



## IMPACT OF GREEN MARKETING IN INDIA

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### ABSTRACT

The biggest need of the day is to protect our natural environment, which is difficult to do in the current era of globalization and keep consumers and customers together. Environmental factors such as global warming and the effects of pollution are of concern to consumers. The concept of green marketing has gained significant traction in the current market and is now considered essential in India. The focus of this article is primarily on green marketing in India. Information has been gathered from secondary sources, including books, newspapers, journals, and websites. It explains the main points involved in putting various green marketing strategies into practice. The article describes the current state of the Indian market and looks at the potential of green marketing as well as the opportunities and problems that businesses face when using it. In summary, there will be continuous growth in the demand for and application of green marketing.

**Keywords:** Customer; Green Marketing; Green Marketing Orientation.



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## A STUDY ON CHALLENGES AND OPPORTUNITIES

### OFF-MARKETING

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#### ABSTRACT:

Not only are countries becoming closer to one another as a result of globalization, but major changes are also occurring in other sectors. Additionally, the marketing industry is impacted by this and is always changing. E-marketing is the process of selling our product over the internet or other digital media. The practice of promoting a brand online is known as e-marketing. It employs a variety of technologies to assist link companies with their clients and consists of both direct response marketing and indirect marketing components. E-marketing is the process of leveraging digital technologies to promote and sell products and services. The internet and e-commerce have grown to be among the fastest-growing technologies in recent years, and they now play a big part in people's daily lives. One of the newest technologies in the IT and e-commerce space is e-marketing. It is believed that e-marketing has a wide range of applications since it not only supports online marketing but also e-mails and wireless media marketing. The study's goal is to highlight the idea of e-marketing. The secondary data found in various online databases of books, research papers, and relevant e-marketing articles was employed as part of the research methodology for this study.

**Keywords:-**E-marketing,internet,artificialintelligence,challenges,opportunities.

#### INTRODUCTION

E-marketing is the promotion of goods and services by electronic means, such as websites or the internet. Internet marketing, web marketing, digital marketing, and online marketing are other names for e-marketing, or electronic marketing. It encompasses not just Internet-based marketing but also email or wireless client relationship management. This kind of marketing



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## PERFORMANCE APPRAISAL 720 DEGREE-AN

### OVERVIEW

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#### Abstract:

The most valuable resource in any organization is its human resource (HR), and as such, its importance to any business is widely recognized. The current scenario's picture indicates that the company's ability to monitor its members' performance is a key factor in determining its overall performance. We can enhance and maximize employee performance by utilizing the same specific measure that determines an organization's performance. The system for performance evaluation is crucial to the human resource framework. This idea was introduced in the 20th century. It is the procedure for gathering, examining, and documenting data about a worker in order to assess and enhance their output. Up to this point, the assessment system has gone from 90 degrees to 720 degrees. The 360 degree system was used by the companies prior to the 720 degree appraisal system. However, the 720 degree appraisal system is about to function effectively in contemporary management. This integrated approach evaluates an employee's work from all angles management, co-workers, customers, and self—and provides timely feedback. The established goals are used to evaluate the performance. As a result, 720 degree appraisal is equal to twice 360 degree appraisal. The 720 degree performance appraisal, as its name implies, is a recently developed concept and the assessment of the employees.

**Key words:** Performance appraisal, self-evaluation, MBO.

#### Introduction:

Performance appraisal, also known as worker appraisal, is a process used to assess an employee's work performance in terms of quantity, quality, cost, and time. It is a component





## ANALYSING THE IMPACT OF EMPLOYMENT PRACTICES ON WORKER PRODUCTIVITY

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### ABSTRACT

Increasingly, firms are considering the adoption of new work practices, such as teams, enhanced communication with workers, employment security, flexibility in job assignments, paying workers for multiple jobs, and greater reliance on incentive pay. For this study, we conducted our own data base through personal site visits to 26 steel plants which contained one specific steelmaking process, and collected longitudinal data with precise measures on productivity, work practices, and the technology in these production lines. A firm's choice of employment practices can determine the productivity of its workers according to a large body of theoretical research in economics. Theories addressing productivity effects of work practices often focus on ways in which compensation policies, such as profit sharing, efficiency wage payments, or other forms of incentive pay, can affect workers' productivity. This study addresses this gap in the literature by assembling a new data set and developing empirical models specifically aimed at producing convincing estimates of productivity effects of different employment practices.

**Keywords :** Employment, literature, Approach, Effect, Data.

### INTRODUCTION

Our empirical approach has several distinctive features. First, we gather data that is restricted to one very specific type of finishing line in the steel industry. This study addresses this gap in the literature by assembling a new data set and developing empirical models specifically aimed at

## Digital Marketing's Impact On Brand Building

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### ABSTRACT

Over the past ten years, digital marketing has become a recognized specialty, with direct marketing serving as its foundation. Because more people own and use personal devices, brand marketers have access to a greater number of direct and indirect communication channels with their target audience. The study focuses on how digital marketing affects a specific product's branding. The study focuses on the ways that technology and digital marketing have increased consumer awareness of brands and their evolution in the marketplace. The study offers a summary of various digital marketing tools and their impact on customer brand building, including blogging, affiliate marketing, mobile marketing, SEO, email marketing, and more. This study contributes to the understanding of the connection between brand development and digital marketing. Customers are encouraged to remember eye-catching captions that blink on digital devices, such as emails and search engines, by means of digital marketing. As part of a multichannel brand communication or engagement programme, the study found that digital channels and assets are used to communicate a brand's positioning. This type of digital marketing is also known as digital branding or digital communication.

**Keywords:** BrandBuilding, BrandCommunication, BrandPerception, Digital Branding, Digital Markting,

### 1. INTRODUCTION

The study of product marketing is not a new idea. The methods employed by a seller to market a product also changed as a result of the social change, specifically the shift in people's behaviour.

Manufacturers' online product sales strategies in the internet era are referred to as 'digital





## CONSUMER PERCEPTION TOWARDS DIGITAL PAYMENT APPS

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### ABSTRACT

As buying behaviours continue to shift as a result of Covid-19, so, too, have mobile and digital wallets in India. With UPI making payments more convenient, mobile wallets and digital payment apps have surpassed credit card usage and are gradually replacing traditional payment methods. A mobile wallet, sometimes known as a digital wallet, is a virtual mobile-based wallet that may be used to make mobile, internet, or offline payments. Wallets are fast expanding as they aid in enhancing transaction speed, particularly for e-commerce enterprises, and all e-commerce marketplaces have connected with such mobile wallets as well. With the introduction of UPI, it has become even easier, as the transfer occurs straight from the bank account rather than from a third party.

**Keywords:** Digital payment apps, mobile payment apps

### INTRODUCTION

For quite some time, the world has been shifting toward all things digital. However, the year 2020 highlighted the critical need to adapt to digital technology as soon as feasible. With the implementation of the shutdown, this transition occurred fairly rapidly, particularly for digital payments in India. Beginning with demonetization in 2016, the Indian government has aggressively promoted and spread internet payments. 'Digital India' was the driving factor behind numerous economic and financial decisions that drove Indians to use online payments. The Digital India program, according to [cashlessindia.gov.in](http://cashlessindia.gov.in), is a flagship program of the Government of India. "Faceless, Paperless, Cashless" is one of Digital India's stated roles.



  
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## ANTIBACTERIAL STUDY ON SUBSTITUTED THIENO QUINOLINES

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### ABSTRACT

In this work, synthesis, antibacterial activities of some new series of substituted quinoline 11,12,13,14 were described. Starting form of 2, 4-dichloro quinolines, new series derivatives has been synthesized by classical methods. Some of these substituted quinolines were tested for their antibacterial activity against Gram-negative bacteria (*Escherichia coli*) and Gram-positive bacteria (*Staphylococcus aureus*, and *Bacillus subtilis* using agar well diffusion method. The synthesized compounds were <sup>1</sup>HNMR, <sup>13</sup>C NMR and Spectra.

**Keywords:** *Quinolines, Antibacterial activity, Thieno compounds*

### I INTRODUCTION:

Heterocycles containing nitrogen are essential to many biological activities in all life forms. It is commonly known that a number of medications take advantage of heterocyclic systems and frequently contain nitrogen and have rings with five or six members. This is why five- and six-membered heterocycles containing sulfur and nitrogen have a significant role in the field of condensed heterocyclic compounds because of their extensive use in organic synthesis as well as in numerous industries, professions, and domains of agriculture.

Quinoline derivatives are intriguing molecules in the pharmaceutical field; numerous compounds have been approved for use as analgesics, immunomodulators, anti-leishmanial, anti-neoplastic, anti-fungal, anti-bacterial, anti-inflammatory, neurotropic, vasorelaxing, and antiviral agents. They have been shown to have antiviral, hypocholesterolemic, hypolemic, antifungal, and antiallergenic qualities.

Sulfur-containing heterocyclic compounds are widespread in natural products and synthetic compounds of high utility in pharmaceutical, agrochemical, and materials



## Nanoparticle synthesis and characterisation of Strontium titanate ( $\text{SrTiO}_3$ ) dopped with Zn.

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### ABSTRACT

Strontium titanate ( $\text{SrTiO}_3$ ) doped with Zn. Nano powder has been synthesized through a sol-gel-hydrothermal method. The X-ray diffraction studies of  $\text{SrTiO}_3$  Nano powder have shown that the as-prepared powder was single phase, crystalline, and has a cubic perovskite structure [7]. A combination of XRD, SEM, and cyclic voltammetry analysis was used to assess the physical properties of catalysts doped with Zn. The experimental findings demonstrate that Zn doping significantly increases  $\text{SrTiO}_3$ 's photocatalytic activity.

**KEYWORDS:** Perovskite, Hydrothermal, zinc oxide

### 1. INTRODUCTION:

The behavior of  $\text{SrTiO}_3$  doped with zinc and having a perovskite structure as pseudocapacitive nanoparticles has been documented in the literature. For  $\text{SrTiO}_3$ , a common oxide of the perovskite type, its form, size, crystallinity, chemical composition, and structure all have a major impact on its physical qualities. Highly important multipurpose perovskite strontium titanate is utilized in the production of electroceramics, photoanodes for quantum dot-sensitized solar cells, and electrical devices [5].  $\text{SrTiO}_3$  is also used in field effect transistors, thermistors, dielectrics, multilayer capacitors, electro-optical appliances, and electromechanical devices. An n-type semiconductor with a cubic perovskite structure is called  $\text{SrTiO}_3$ . Using the sol-gel-hydrothermal method, strontium titanate ( $\text{SrTiO}_3$ ) nanopowder was synthesized. X-ray diffraction studies of the  $\text{SrTiO}_3$  Nano powder showed that it was crystalline, single phase, and had a cubic crystal structure.

### 2. EXPERIMENTAL PROCEDURE.

For the preparation of the precursor solution, all chemicals were of analytic grade and without further purification. The  $\text{SrTiO}_3$  powders were synthesized by hydrothermal method. For starting, Ti ( $\text{OCH}(\text{CH}_3)_2$ )<sub>4</sub> was prepared from the hydrolysis of titanium (IV) isopropoxide and 2-propanol. Firstly, Sr



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## A STUDY ON CHARACTERISTICS OF BISMUTH OXIDE ( $\text{Bi}_2\text{O}_3$ ) NANOPARTICLES

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### Abstract:

In this present investigation, Co-precipitation process has been successfully used to manufacture Bismuth Oxide ( $\text{Bi}_2\text{O}_3$ ) nanoparticles. Scanning electron microscopy (SEM), Fourier transform infrared spectroscopy (FT-IR), and X-ray diffraction (XRD) have all been used to study the crystallite size and shape of bismuth oxide ( $\text{Bi}_2\text{O}_3$ ). The co-precipitation approach is a cheap, quick, and low temperature process that shows promise for producing Bismuth Oxide ( $\text{Bi}_2\text{O}_3$ ) nanostructures, according to the obtained results.

**Key words:** co-precipitation technique, bismuth oxide, and nanostructures of bismuth oxide ( $\text{Bi}_2\text{O}_3$ ).

### Introduction:

In the present work we report new results of the synthesis of  $\text{Bi}_2\text{O}_3$  polymorphs using a sol-gel procedure. This method is commonly used for preparation of oxide. Using chemical methods, e.g. co-precipitation, sol-gel, hydrothermal technique have been confirmed to efficiently control the morphology and chemical composition of prepared powders and it can reduce the sintering temperature [1].

Bismuth is stable to oxygen and water but dissolves in concentrated nitric acid. All bismuth salts form insoluble compounds when put into water. It crystallizes in a rhombohedral lattice and possesses a highly anisotropic Fermi surface so that all transport properties are a function of the direction within the crystal [2]. The characteristic length scales Fermi wavelength and mean free path of the electrons are both very large compared to metals, namely 40 and 100 nm at room temperature. This allows the observation of quantum size effects as well as finite size effects at relatively large wire diameters.



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This conference provides an international forum for researchers, developers, engineers and practitioners who are involved in real time projects that provide solutions to exchange their valuable ideas and showcase the ongoing works which may lead to path breaking foundation of the futuristic engineering. It accentuates indispensability of interdisciplinary and cross – linked thinking with respect of innovation and market opportunities. All the accepted paper will be published in International Journal with ISSN & Conference proceeding having ISBN .

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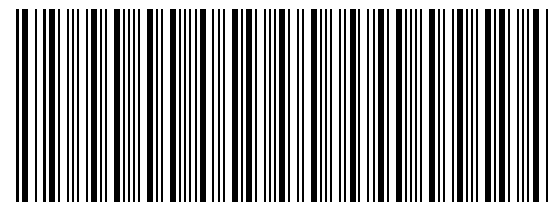
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## A STUDY ON LABOUR WELFARE MEASURES AND SOCIAL SECURITY IN IT INDUSTRIES WITH REFERENCE TO CHENNAI

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### INTRODUCTION


Labor welfare is a key component of industrial relations. They ensure that the employee receives fair compensation and that they are satisfied. The growth of computerization, mechanization, and industrialization has boosted labor welfare programs. The industrial workers are unable to provide for the basic needs of life while keeping up with the fast-paced modern lifestyle. The workers need more stimulation to keep their bodies and minds in sync. Labor welfare is expensive, even though it has been suggested as a way to boost production efficiency. Every employer provides a variety of welfare programs for their workforce, varying in significance. The social and economic aspects of workers' lives have a direct bearing on the social and economic development of the country. feel more content and fulfilled in their careers and Your business will gain from increased profitability and productivity.

Any organization's personnel and HR management would be incomplete without the welfare programs and measures, which are essential to achieving the intended outcomes. As a result, this will increase productivity within the company. Through statutory bodies like trade unions, the organization designs and systemsatizes the welfare measures.

Government labor offices require that all organizations provide the bare minimum of facilities. This will ensure that the bare minimum requirements are satisfied, enabling an employee to carry out their duties and complete tasks as effectively as possible.

An industrial relations system's "three factors" are the various institutions that comprise the system. All economies, developed and developing, contain these actors. Government, workers (employees) and their organizations (trade unions), management (employers) and their



  
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## AI APPLICATIONS IN MARKETING

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### Abstract

The marketing industry can greatly benefit from artificial intelligence (AI). It helps with the proliferation of data sources and information, enhancing the data management capabilities of software, and creating complex and sophisticated algorithms. AI is transforming the way consumers and brands communicate with one another. Because AI generates and collects data through algorithms, they can quickly decide which channel to use at any given time and what content to target customers with. When AI is used to personalize user experiences, users feel more at ease and are more likely to purchase what is offered. AI tools can also be used to evaluate the effectiveness of rivals' marketing campaigns and uncover the expectations of their target audience. Machine Learning (ML) is a subset of AI that allows computers to analyse and interpret data without being explicitly programmed. Furthermore, ML assists humans in solving problems efficiently. The algorithm learns and improves performance and accuracy as more data is fed into the algorithm. For this research, relevant articles on AI in marketing are identified from Scopus, Google scholar, researchGate and other platforms. This paper attempts to review the role of AI in marketing. The specific applications of AI in



  
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## A STUDY ON E-BANKING SERVICES

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### ABSTRACT

The bank's most lucrative offering is electronic banking. A growing number of people are switching to online banking and quickly realizing how beneficial it is. Customers can use it to easily and affordably manage their accounts at any time and from any location. The most current in a long line of technological marvels that use the internet to provide goods and services is electronic banking. As the World Wide Web has developed, electronic banking has been changing the surrounding environment. The purpose of the research is to ascertain how clients view online banking, what influences their decision to use these services, how satisfied they are with these services, and what issues they run into.

**KEYWORDS:**E-banking, Technology, Online.

### INTRODUCTION

Today's banks are the most aware of the risks and possibilities that they confront in a constantly shifting competitive landscape. Offering e-commerce solutions gives banks a significant competitive advantage over possible rivals. Through e-commerce, banks would be able to fortify their bonds with clients, offer more services, and keep outsiders from invading their business operations. The services offered by a network of connected bank branches are known as core banking. Customers of the bank can use any of the participating branch offices to access their funds and conduct other basic transactions.

The phrase for modern banking is e-banking. E-banking, sometimes referred to as online, internet, or virtual banking, is an electronic payment system that allows a bank or other financial institution's customers to carry out a variety of financial transactions via the institution's website. PC banking gave rise to internet banking. Online banking is similar to having the bank come to your computer at a time and location of your choosing. Online banking employs the internet as a delivery channel for financial operations such bill payment, money transfers, mortgage payments, checking and savings account balance viewing, financial instrument purchases, and certificate of deposit acquisition.



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## ROLE OF GREEN MARKETING

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### ABSTRACT

Green Marketing is a noticeably new concept, which includes the merchandising of merchandise and services which are safe for the environment. It entails development, manufacturing, promotion, distribution, consumption, and disposal of the products and offerings in a sustainable fashion so that least damage is brought on to nature. In this way, the advertising and marketing of the company's supplying is done on the basis of its environmental advantages. Activities may additionally encompass product adjustment, alternate in the system of production, alternate in marketing and sustainable packaging of products.

### INTRODUCTION

Green advertising and marketing refers to the exercise of developing and advertising merchandise primarily based on their actual or perceived environmental sustainability. Green advertising includes marketing the decreased emissions related with a product's manufacturing process, or the use of post-consumer recycled materials for a product's packaging. Some companies additionally may additionally market themselves as being environmentally-conscious businesses through donating a component of their income proceeds to environmental initiatives, such as tree planting.

### What is green marketing?

Green advertising is the practice of promotion merchandise or services that are environmentally friendly or have a wonderful influence on the planet. It involves incorporating sustainability

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## E-RECRUITMENT: A GUIDELINE FOR E-MANAGING HUMAN RESOURCES

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### Abstract:

An organization's people their experience, skills, inventiveness, and insights are its only true assets. Every organization's most important component is its human resource base. It stands for an individual's entire skill set, aptitude, belief system, and creative ability when it comes to managing the affairs of an organization. Human resource management is essential to any business. It has to do with the individuals who work there and the connections they make both inside and outside the company. Hiring competent employees is one of the most crucial tasks since it provides the company with human capital. Numerous technological advancements have occurred in the field of human resource management in recent years. The human resources department's overall operation has been impacted by the internet. HR procedures and processes have been supported by a variety of technologies, ranging from intricate file-folder systems to automation, and from the use of several databases and systems to a single version of the entire system. Human resource information systems, virtual human resources, electronic human resource management (E-HRM), and other innovations have helped it advance. E-HRM refers to the use of the internet and other technologies to conduct business transactions. To put it another way, enterprise resource management (ERM) is the process of integrating HRM practices, policies, and strategies into an organization by means of targeted web technology-based channels. It has an impact on all facets of human resource management. Posting job openings on a company website or the website of an online recruitment vendor is referred to as "e-Recruitment." It enables candidates to electronically transmit their resumes via email or in another electronic format. The majority of the standard administrative tasks associated with hiring have been lessened thanks to e-recruitment techniques and systems. The goal of the study is to define the broad idea of e-recruitment. Its goal is to gather data on e-recruitment





# THE ROLE OF BRAND CELEBRITY PERSONALITY CONGRUENCE IN ENHANCING ADVERTISING EFFECTIVENESS

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## ABSTRACT

The use of celebrities in brand endorsements has been a widespread strategy in advertising. Over the years, academicians and practitioners have been trying to determine effective strategies to select appropriate celebrities for brand endorsements. Many models and tools have been proposed to help in this selection. However studies have focused on the appropriate congruence of celebrity with the product category, rather than with specific brand, ineffective product endorsements. But, when every product category is crowded with many brands then, it is imperative to investigate the role of specific brand's personality-celebrity personality congruence and its role in creating effective celebrity endorsements. Further, the congruence in celebrity endorsement literature has been seen on the bases of source characteristics like attractiveness and expertise. It would be important to see the celebrity-brand congruence on the basis of the stimuli beyond source characteristics. The present study the reform empirically investigated the variation in advertising effectiveness measures across the high and low congruent pairs of celebrity endorser and brand based on the personal it traits. The findings suggested that the advertising effectiveness measures such as advertisement believability and attitude toward ad were significantly different; while measures such as attitude toward brand and purchase intention were almost similar across the high and low congruent pairs of celebrity endorser and brand.

**Keywords:** celebrity, endorsements, Brand, personality, Congruence, Advertising, effectiveness.



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## An Analysis of Corporate Governance Literature

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### Abstract.

A company's processes, structure, and methods for managing and directing its business and affairs are collectively referred to as corporate governance. Through the process of holding managers accountable and improving the performance of the company, corporate governance also increases long-term shareholder value. By defining the interests of shareholders and managers differently, it also eliminates the conflict between ownership and control. In order to determine the efficacy of corporate governance mechanisms in businesses and institutions, this paper examines the large body of literature on corporate governance practices. The reduction of the principal-agent problem as a result of the organizations' efficient corporate governance mechanisms is another main objective of the paper.

**Keywords:** Corporate governance, agency theory, ownership, shareholders, managers.

### 1. Introduction

The broad term "corporate governance" refers to the procedures, norms, laws, and establishments that guide how businesses and organizations behave, manage, and oversee their operations. It manages the relationships between the stakeholders, including the board of directors and shareholders, and strives to accomplish the organization's goal. It also addresses individual accountability by means of a mechanism that lessens the principal-agent issue inside the company. Excellent corporate governance is a prerequisite for creating the compelling investment climate that competitive businesses require to forge a strong position in effective financial markets. Strong corporate governance is essential to economies with a strong business heritage and helps entrepreneurship succeed. Over the past twenty years, corporate governance has been the primary focus of finance research. The fundamental issue



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## BUSINESS SUSTAINABILITY FOR COMPETITIVE

### ADVANTAGE

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### ABSTRACT

Sustainability may drive business success in addition to mitigating global concerns. Environmental, social, and governance (ESG) measures are increasingly being used by investors to assess an organization's ethical effect and sustainability standards. Investors look at things including a company's carbon impact, water consumption, community development efforts, and board diversity. According to research, organizations with strong ESG ratings have reduced loan and equity costs, and sustainability activities can help enhance financial performance while promoting public support. This article tries to shed light on the sustainability measures used by businesses to remain competitive.

**Keywords:** Sustainability, competitive, green ideas, eco-friendly

### INTRODUCTION

To sustain means to continue at a constant rate or level permanently. In a business setting, we describe a sustainable firm as an organization that operates indefinitely. As a result, becoming a sustainable firm is no easy task, and we have yet to accomplish it. As a result, the concept is somewhat enigmatic. With no type of business to compare it to, the term's meaning has shifted and become diluted over time. Suddenly, business sustainability is concerned with climate change, poverty alleviation, and gender equality.

To address economic sustainability, Environmental, Social, and Governance (ESG) criteria were introduced in an attempt to reduce uncertainty. The ESG framework was







## A Methodology for Enhanced Security in Big Data Analysis: Proactive Classification and Protective Measures

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### **Abstract**

Large-scale data and information flow between, within, and between enterprises worldwide. Financial, legal, or private information is among the sensitive, private, and limited data that could be included in this huge data set. Information loss, threat, or leakage could result in a severe security risk for that data. It's still difficult to secure large data during the analysis stage, particularly in cloud systems. In order to safeguard large data during analysis, this study suggests classifying the data before any processing, copying, or moving can occur. The security protocols will be activated in accordance with the data level criticality based on the classification of big data.

**Keywords—** big data; data classification; encryption; threats data loss; data Leakage

### **I. INTRODUCTION**

We deal with a lot of structured, unstructured, and semi-structured data that is generated in a variety of ways, according to big data [7]. Big data is typically defined as data volumes that reach petabytes, exabytes, or youtabytes. Big data encompasses all areas of knowledge, including business, science, and the arts. The complexity of big data systems grows when dealing with this kind of variable data.

Big data handling is complex and challenging to handle, query, or analyze using conventional tools and methods. Volume, velocity, variety, and veracity are the four primary variables that define the complexity of big data [8].

- The term "volume" describes the enormous amounts of data—petabytes, exabytes, and youtabytes—that one must manage.

- The term "velocity" describes the quickly increasing rate at which data is generated and



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## Analysis of Fault Prediction Using Fuzzy and Backpropagation Methods

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### ABSTRACT


One of the most crucial elements in software development is software quality. It may rely on a variety of factors. Metrics and maintainability rank among the best methods in fuzzy logic. In this paper, fuzzy logic is applied to software metrics. The measurement of the software development process and product is known as a software metric. It can be applied to project management as a variable. The most popular kinds of these models forecast a software system's development effort based on its size, complexity, features, and metrics. The conventional methods of formal and linear regression models have not been able to solve a great deal of issues. Initially, the issue managers with project metrics models encounter is the elicitation of numerical. The proposed techniques can help to overcome some of the difficulties by representing the imprecision in both input and output. This technique especially fuzzy logic is investigated and some usable recommendation is made. Different levels of available information and desired precision can be used differently, mainly depending on the current phase, although a single model can be used for consistency.

**Keywords—FuzzyLogic, Neural Network, Backpropagation, Software Metrics;**

### 1. INTRODUCTION

It has been demonstrated that the modeling approach based on fuzzy logic is a valuable supplement to the current statistical and machine learning methods employed in software development. Several papers have demonstrated favorable empirical comparisons support fuzzy logic's theoretical preference in some situations by comparing the predictive accuracy of this technique using metrics data sets. Software for modeling using fuzzy logic has been created to aid in the project estimation process. The three options are; generating linguistic output; using expert knowledge; and using linguistic inputs.



  
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## A SURVEY OF BIOMETRIC AND SPEECH RECOGNITION

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### ABSTRACT

Strong individual acknowledgment plans are necessary for a wide range of frameworks to either confirm or determine the nature of a person stating their services. Ensuring that only legitimate clients can access the services is the driving force behind such conspiracies. Growing concerns about security and rapid improvements in networking, communication, and mobility have led to an increased need for robust client authentication protocols. Biometrics, which is defined as the study of identifying an individual based on their physical or social characteristics, is beginning to gain recognition as a legitimate method of determining an individual's personality. For validation, a variety of biometric techniques are employed. These include voice recognition, palm print, hand geometry, face detection, fingerprint recognition, retina, iris, and so forth. In this work, we provide a brief introduction to the area of biometrics and its many approaches. Voice recognition is playing a crucial role in employment invalidation, in addition to several biometric procedures. In this post, we examine several biometric techniques and provide an overview of speech recognition technologies for identification.


**keywords—** *Authentication, Biometrics, Recognition, Voice.*

### 1. INTRODUCTION

The Greek words bio (life) and metrikos (measure) are where the word biometric first appeared. It is amazing how humans instinctively use a person's signature—such as a face, finger, ear, or voice—to identify one another. Recognition of individuals based on their body trademark has become increasingly interesting in emerging innovation applications since a wide range of applications nowadays require reliable confirmation plans to verify an individual's personality.

In the past, access to verification systems has been restricted via passwords and ID cards, but these methods are problematic and can easily be compromised. Biometrics cannot be lost, taken, or forgotten, and it is practically unimaginable to manufacture one.



  
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## Enhancing Aadhar Authentication Security through Fingerprint Verification: A Robust Approach

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### ABSTRACT

The main purpose of this project is to develop a secure electronic voting machine using a fingerprint authentication method. Fingerprints are accessed using the AADHAR card database model, a secure system to avoid misunderstandings during elections. The Aadhar registration process took place in India several years ago. At that time, the Indian government was collecting fingerprint details of each person and IRIS remained in the Indian government's database. If the Indian government links this database with the voter IDs that exist in today's electoral system, anyone can easily vote using fingerprint recognition. The system sends a confirmation message about the vote to the voter's registered mobile phone number. Additionally, voting data and voter details can be sent to a nearby database management unit using IoT. If an unauthorized person enters the polling place and votes, or if a person who has already voted re-enters the polling place with an electronic tag and votes. In this case, a buzzer alerts cabin-level police officers. This biometric system can be used for election purposes to easily avoid election manipulation. This article focuses on the Aadhar card system that uses Android devices as smart ID cards. The mobile application is developed in Java and uses biometric fingerprint authentication to ensure personal authentication. Additionally, your entire workplace will become a WiFi zone. So, connecting or disconnecting your Android device (smart ID card) will determine whether you have Aadhar details or not.

**Keywords:** Android, Fingerprint, RFID, Aadhar, IOT, SMS.

### I. INTRODUCTION

This document defines the guidelines for electronic Aadhar approaches and developments in data storage and transmission. The user has to show his Aadhar card every time he goes to the place where the SIM card is purchased. This is often a time-consuming method as the person has to verify the Aadhar card. To avoid such problems, a fingerprint scanner has been developed that does not require people to carry an ID card containing all their data. Aadhar puts his finger on the fingerprint module. This information is sent to the control unit for verification and the controller reads the DATA from the reader and compares this data with the existing data. If the data matches the information already stored, the person is allowed to purchase a SIM card. Otherwise, a message will appear on the LCD and the person will not be allowed to purchase the SIM card.

An Aadhar database will be created containing the fingerprints of all people. This system controls illegal immigrants and repeat offenders. Therefore, when this system is used, the fingerprint scan is true, and if the fingerprint does not match, it means a mismatch message will be displayed.

### II. WHY BIOMETRICS FINGERPRINT

#### Advantages



  
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## SURVEY ON BRAIN TUMOR IDENTIFICATION THROUGH MEDICAL IMAGES

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### **Abstract:**

This paper presents a survey on the detection of brain tumor. Brain Tumor can be described as a cluster of abnormal cells which grows inside the brain by uncontrolled growth in tissues of the brain which needs to be treated, If left untreated it can grow beyond to other parts of brain too. It is very difficult and challenging to detect the brain tumor in initial phase as there are very few or no symptoms in the early stage. Detecting the brain tumor in early stage can provide more treatment options. There are various methods which can be used to detect the tumor such as Segmentation, Thresholding, Fuzzy clustering or Artificial neural network.

**Keywords:** Brain Tumor, Magnetic Resonance Imaging (MRI), Image Segmentation, Thresholding, ANNs, FCM.

### **1. INTRODUCTION**

Brain Tumor is a disease of abnormal cells growing and multiplying in an undisciplined manner. It has become one of the most common and major causes for the increase in Mortality among children and adults in the world. Brain tumor cells grow inside and along the brain. Brain is portion of central nervous system which is located into the skull. It is soft spongy mass of tissue that is protected by bones of skull and three slim membranes called meninges.

Brain tumor is cluster of abnormal cells which indirectly destroys healthy cells of brain and causes inflammation, brain swelling and pressure within the skull. Brain tumors can be divided into main two types one is benign and second one is malign. Brain tumor can be found in different sizes and shapes which differ case by case. But the effects of both the types of tumor are mostly same and can cause similar problems depending on their kind. Benign Tumor is a non cancerous type of tumor which does not grow in nearby tissues or spread to other parts [1].



  
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## Efficient Multi-View Face Detection with SURF: The Facial Constellation Approach

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### Abstract -


The primary innovation is the introduction of a "face constellation" facilitating multi-view face detection. Most face recognition systems rely on facial expression data for training, and this paper adopts an economical approach, employing Speeded-Up Robust Features (SURF) upon face extraction. Facial contours are obtained through a conic fitting method, followed by the extraction of elliptical face regions using SURF descriptors. Geometric consistency is ensured by comparing information and query images, illustrating the algorithm's effectiveness in real-world human-robot interaction. The paper explores the use of RANSAC computational rules for precise trajectory estimation, incorporating visual and proprioceptive data to significantly increase tracked alternatives per frame. To address computational impracticality in outlier rejection, an algorithm resembling RANSAC leverages the filter's probabilistic prediction, enhancing the outlier rejection stage's effectiveness. The algorithm further improves efficiency by reducing token information subnet dimensions through prior data utilization. Another contribution involves a color-based sectioning process in the reference image and area window-based matching for the first inequality estimate, contributing to outlier elimination in the feature matching process. In conclusion, the paper presents a holistic approach to face detection and recognition, introducing novel techniques for multi-view scenarios and trajectory estimation while maintaining computational efficiency.

**Keywords** - Biometric, Surf Algorithm, Ransac Algorithm, Face Detection, Face Recognition, Machine Learning.

### I. BIOMETRICS

The estimation and factual analysis of an individual's unique physical and social characteristics is known as biometrics. The innovation is mostly used for distinguishing people who are being



  
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## An In-Depth Survey of Varied Recommendation Systems

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### ABSTRACT:

Recommender systems are commonly employed to furnish individuals with suggestions predicated on their interests. Recommender systems have proven a helpful aid in overcoming information overload due to the ever-increasing amount of information available online. It is impossible to overestimate the importance of using recommender systems, considering their ability to help with a variety of over-choice issues. Recommendation systems come in a variety of forms with various concepts and methods. Recommendation systems have been implemented in a wide range of applications, such as media, e-commerce, transportation, healthcare, and agriculture. This paper provides an overview of the types of recommendation systems.

**Keywords:** Recommendation Systems, Machine Learning, Data Sparsity, cold-start

### I. INTRODUCTION:

Over the past few decades, the internet and contemporary web services have grown, making a wealth of information more widely available to everyone [1]. Users may find it difficult to sift through all of this data and extract the most important details. Millions of products are sold on a single platform by numerous internet retailers who suggest products to their customers. An average user may get information overload from looking through all of the options. By providing customers with precise, tailored recommendations of goods based on their tastes, recommender systems seek to address the issue of information overload while also personalizing the user experience [2]. Based on available data, a recommendation system's (RS) goal is to determine whether or not a user would find an item valuable [3]. The use of these systems has been steadily growing within the last few years, where they are used in retail and e-commerce firms like eBay and Amazon. High-quality RS's positively impact the user experience and the overall enterprise's revenue or decision.

This paper is structured as follows: Section 2 presents the related Works. Section 3 presents the recommendation categories, Section 4 is for the conclusion and future directions.



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## Attack the Recommender System with Augmented User Profiles

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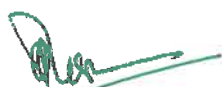
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### ABSTRACT

Online communities are virtual places on the Internet where a group of individuals can communicate and share information with others who have similar interests or goals. Combining people's choices into a group preference or the combining of individual suggestions into group recommendations, which is a crucial part of group recommendation, frequently leaves a small number of group members unsatisfied while pleasing the majority. The improved group suggestion technique that this study suggests will assist group activities in online communities will increase both the effectiveness of the group recommendations and the pleasure of the individual group members. Many online services now depend on recommendation systems (RS), which are becoming an integral component. There is a natural incentive for dishonest parties to fake RS for profits given its crucial role in influencing customers to make purchases. In this article, we examine the shilling attack, a profitable and persistent campaign in which a hostile party introduces a number of user identities to elevate or denigrate a target item. We provide a brand-new Augmented Shilling Attack framework (AUSH) and put Generative Adversarial Network to use in its implementation. In order to target a particular user category or stay under a certain budget, AUSH can customize assaults against RS. We demonstrate through experiments that the attack impact of AUSH is perceptible on a variety of RS, including both traditional and contemporary deep learning-based RS, but is essentially undetectable by the most advanced attack detection model.

**Keywords:** Recommender systems, adversarial attacks, generative adversarial network (GAN), shilling attack.



  
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## Exploring Blockchain Technology: Architecture, Consensus Algorithms, Challenges, and Future Developments

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### Abstract

The blockchain, which forms the basis of Bitcoin, has been the subject of a lot of attention lately. Blockchain acts as an unchangeable ledger that permits decentralised transaction processing. Applications built on blockchain are proliferating and spanning a wide range of industries, such as financial services, reputation management, Internet of Things (IoT), and more. Blockchain technology still faces a number of obstacles, though, including issues with scalability and security that need to be resolved. An extensive description of blockchain technology is provided in this paper. First, we give a summary of the architecture of blockchains and contrast a few common consensus algorithms across various blockchains. In addition, a brief description of current developments and technical difficulties is provided. We also outline potential blockchain developments for the future.

**Keywords:** scalability, consensus, decentralisation, and blockchain.

### 1 Introduction

The term "cryptocurrency" is now widely used in both business and academics. Bitcoin, one of the most popular cryptocurrencies, has seen tremendous progress, with its capital market hitting \$10 billion in 2016. Transactions in the Bitcoin network can occur without the involvement of a third party if a specifically constructed data storage structure is in place. The blockchain, which was first suggested in 2008 and put into use in 2009, is the fundamental technology behind Bitcoin. All committed transactions are recorded in a list of blocks on the blockchain, which may be thought of as a public ledger. As fresh blocks are consistently added to it, this chain gets longer. For user security and ledger consistency, asymmetric cryptography and



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## The Duality of Nature in Robert Louis Stevenson's "Strange Case of Dr. Jekyll and Mr. Hyde"

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### Abstract:

This thesis explores the theme of duality in Robert Louis Stevenson's novella "Strange Case of Dr. Jekyll and Mr. Hyde." It delves into the portrayal of human nature as a complex interplay between good and evil, as exemplified through the characters of Dr. Jekyll and Mr. Hyde. Through a close analysis of the text, this paper examines how Stevenson uses symbolism, narrative structure, and character development to convey the inherent struggle between conflicting aspects of human identity. By investigating the psychological and moral dimensions of duality, this study seeks to shed light on the enduring relevance of Stevenson's work in understanding the complexities of human nature.

**Keywords:** Robert Louis Stevenson, Strange Case of Dr. Jekyll and Mr. Hyde, duality, human nature, symbolism, morality

### Introduction

Robert Louis Stevenson's "Strange Case of Dr. Jekyll and Mr. Hyde" is a seminal work in English literature that delves into the complexities of human nature. At its core, the novella explores the duality inherent in every individual—the constant struggle between good and evil, virtue and vice. Through the characters of Dr. Jekyll and Mr. Hyde, Stevenson presents a compelling narrative that reflects the moral and psychological ambiguities of human existence. This paper aims to analyze how Stevenson employs various literary techniques to depict the theme of duality and its profound implications for understanding human nature.

### About the Author:

Robert Louis Stevenson (1850–1894) was a Scottish novelist, poet, essayist, and travel writer, best known for his enduring works of fiction, including "Treasure Island," "Kidnapped," and "Strange Case of Dr. Jekyll and Mr. Hyde." Born in Edinburgh, Scotland, Stevenson came from a family of lighthouse engineers and was expected to follow in his father's footsteps. However, he pursued his passion for writing, much to the chagrin of his family.

Stevenson studied law at the University of Edinburgh but never practiced, opting instead to devote himself entirely to literature. He embarked on extensive travels throughout Europe and the United States, drawing inspiration from



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## The Modernist Experimentation of James Joyce *Ulysses*

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### Abstract:

This paper examines the modernist experimentation of James Joyce in his seminal work "Ulysses." Through an analysis of narrative techniques, linguistic innovation, and thematic exploration, it delves into how Joyce's groundbreaking approach reshaped the landscape of 20th-century literature. The study explores Joyce's use of stream of consciousness narration, his linguistic virtuosity, and his experimental narrative structure, revealing how these elements converge to create a multifaceted exploration of human consciousness and the complexities of everyday life. By examining the novel's abstract themes and dissecting its intricate narrative techniques, this paper offers insights into Joyce's enduring legacy as a pioneering figure of modernist literature.

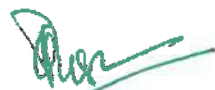
### Keywords:

Modernist experimentation, Stream of consciousness, Linguistic innovation, Thematic exploration, Literary legacy.

### Stream of Consciousness Technique:

James Joyce's utilization of the stream of consciousness technique in his magnum opus "Ulysses" represents a seismic shift in the landscape of literary narrative. Within the novel's pages, Joyce crafts a literary world that immerses readers within the intricate workings of his characters' minds. The stream of consciousness technique, a hallmark of modernist literature, serves as the vehicle through which Joyce navigates the labyrinthine corridors of human thought and perception. Through the stream of consciousness technique, Joyce dismantles the traditional linear narrative structure, opting instead for a portrayal of consciousness that mirrors the ceaseless flow of thoughts, memories, and sensations. Readers are thrust into the tumultuous currents of the characters' minds, where thoughts cascade and collide in a chaotic symphony of associations. The result is a narrative that unfolds not through conventional plot progression, but through the meandering pathways of subjective experience.



  
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# The Internet of Robotic Things: Understanding Architecture, Components, and Challenges

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## **Abstract —**

These days, robotics and the Internet of Things (IoT) cannot be viewed as two distinct fields. The term "Internet of Robotics Things" (IoRT) was coined lately to explain how robotics technologies are integrated into IoT situations. Consequently, there has been interaction between these two scientific domains, connecting research communities. With this work, we hope to advance the conversation on the growth of this multidisciplinary field and take a step closer to unifying the two communities. The paper discusses the problems with the IoRT architecture, the integration of smart spaces and robotic applications, and offers an overview, analysis, and difficulties of potential solutions for the Internet of Robotic Things.

## **I. INTRODUCTION**

Internet of Things (IoT) is a vivid and active research area [1] and, at the same time, robotics is a solid and established field with numerous applications [2], [3], [4]. Although for some time the two directions continued intensively but separately, it is clear that modern scenarios require an integration of the two disciplines and a joint effort from the communities. With our work, we aim at developing this initiative. This paper surveys IoT and Robotics technologies together with their integration towards the realization of the *Internet of Robotics Things* (IoRT) [5], [6], [7], [8]. We define several related concepts and we organize them in a coherent manner. This conceptual frame will be useful to the reader in order to identify the state-of-the-art literature and how to connect the dots into an holistic vision of the future synergy that has to unavoidably come between IoT and Robotics. The aim of this paper is to provide a better understanding of the IoRT and identify open issues that is worth investigating in future. In order to provide a comprehensive view of the area, the



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## YouTube Recommendations Using Deep Neural Networks

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### ABSTRACT

YouTube represents one of the largest scale and most sophisticated industrial recommendation systems in existence. In this paper, we describe the system at a high level and focus on the dramatic performance improvements brought by deep learning. The paper is split according to the classic two-stage information retrieval dichotomy: first, we detail a deep candidate generation model and then describe a separate deep ranking model. We also provide practical lessons and insights derived from designing, iterating and maintaining a massive recommendation system with enormous user-facing impact.

**Deep learning; scalability**

### 1. INTRODUCTION

YouTube is the world's largest platform for creating, sharing and discovering video content. YouTube recommendations are responsible for helping more than a billion users discover personalized content from an ever-growing corpus of videos. In this paper we will focus on the immense impact deep learning has recently had on the YouTube video recommendations system. Figure 1 illustrates the recommendations on the YouTube mobile app home.

Recommending YouTube videos is extremely challenging from three major perspectives:

- **Scale:** Many existing recommendation algorithms prove to work well on small problems fail to operate on our scale. Highly specialized distributed learning algorithms and efficient serving systems are essential for handling YouTube's massive user base and corpus.
- **Freshness:** YouTube has a very dynamic corpus with many hours of video are uploaded per second. The recommendation system should be responsive enough to model newly uploaded







# FUNDAMENTALS FOR STEGANOGRAPHY USING LEAST SIGNIFICANT BIT ALGORITHM

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## Abstract

The development of multimedia and internet allows for wide distribution of digital media data. It becomes easier to edit, modify and duplicate digital information. It is a big security and privacy issue, it become necessary to find appropriate protection because of the significance, accuracy and sensitivity of the information. Steganography considers one of the techniques which used to protect the important information. The main goals for this paper to recognize the researchers for the main fundamentals of steganography. In this paper provides a general overview of steganography ,types, characterization of steganography techniques. The Least Significant Bit(LSB) is one of the main techniques in spatial domain image steganography. A new technique of LSB steganography has been proposed which is an improvised version of one bit LSB technique. This paper reviews the LSB algorithm used for image steganography to the security potential of steganography for business and personal use.

## 1. INTRODUCTION

2. As the production storage and exchange of information becomes more extensive and important in the functioning of societies the problem of protecting the information from unintended and undesired use becomes more complex. Our goal is to characterize a subset of such methods named network steganography which are information-hiding techniques that utilize network protocols as enablers of hidden communication. The term network steganography was first coined. We begin our considerations with some general remarks concerning the terminology used in the area of information security, as we believe there is some confusion in this area. In particular we aim to clarify the relationships between the terms steganography, cryptography and information hiding.

3. The terms steganography and cryptography originate from the ancient Greek words steganos, meaning protected (covered) and cryptos meaning hidden (secret) respectively. These two meanings are quite close if considered the term steganography could be substituted with the term cryptography.

Steganographic techniques may be classified with respect to different criteria in particular with respect to their intended use and to the type of information carrier utilized. We constrain our considerations to techniques based on various functions of communication protocols of contemporary communication networks. This specific class of techniques is referred to as network steganography. Steganographic techniques for storing messages may be formally considered to be network



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## A STUDY ON LORENZ SYSTEM

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### ABSTRACT

Simple air or vapor molecules define a curve that is governed in a similar way as astronomical orbits; the only distinction between them is our ignorance. Probability varies depending on our level of knowledge and ignorance. It is possible to show that the trajectories do not explore the whole space but, at times long enough to stay in a bounded region of the phase space. From a technical standpoint, the Lorenz system is nonlinear, non-periodic, three-dimensional, and deterministic. This study discusses the equilibrium, symmetry, and invariance aspects of the Lorenz system and equation. This is a basic overview of weather forecasting's primary use.

**Keywords:** Lorenz System, Lorenz Equation, Attractor, Stability, Equilibrium.

### 1. INTRODUCTION

American meteorologist Edward Lorenz was working on weather prediction at MIT in the early 1960s [1]. The weather that is observed and that which is anticipated frequently diverge. He tried adding the stochastic terms—that is, random forces—to the equations but was unsuccessful. Computers were new at the time. The first person to forecast the weather was Lorenz, whose differential equation model used to express temperature, pressure, wind speed, and other variables. Convection was the main ingredient model used by Lorenz. At least one book-length study and hundreds of research papers have been written about the Lorenz equations.

Edward Lorenz was the one who initially examined the Lorenz system, which is a set of ordinary differential equations. It is evident that under specific beginning circumstances and parameter values, chaotic solutions exist. We are aware that the Lorenz attractor is a collection of chaotic Lorenz system solutions that, when plotted, resemble a figure eight or butterfly. The Lorenz equations were crucial in Dilao R. and Dpmingos T.'s (2001) discovery of chaos.





## APPLICATIONS OF DOMINATION AND POWER DOMINATION GRAPH

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### **Abstract:**

Domination theory aids in optimizing network routing, fault tolerance, and sensor placement. Power domination extends this, considering node influence, vital in social networks and organizational hierarchies. In communication networks, domination theory optimizes relay placement and minimizes latency. Power domination enhances this, enabling energy-efficient protocols. In biology, domination theory identifies key molecules in metabolic pathways and gene regulation. Power domination incorporates factors like gene expression levels, providing nuanced insights. Together, these theories offer versatile tools for analyzing and optimizing various networked systems, spanning computer science, social networks, communication, and biology.

**Key Words:** Domination graph , Power domination Graph

### **1. Introduction:**

Graph theory serves as a powerful framework for modeling and analyzing complex networks found in diverse real-world systems. Among the multitude of concepts within graph theory, domination and power domination emerge as crucial tools for understanding the structural properties and dynamics of networks. Domination theory focuses on identifying subsets of nodes that control or influence the entire network, while power domination extends this notion by considering varying degrees of influence among nodes.

In this introduction, we embark on an exploration of the applications of domination and power domination in graph theory. We delve into the significance of these concepts across various domains, including computer science, social networks, communication networks, and biology. By uncovering how domination and power domination principles manifest in different contexts, we gain insights into optimizing network design, enhancing resilience against failures, modeling influence propagation, and understanding biological systems.



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## Decomposition of Sunlet Graph into H Star Vertex Super Magic Graph

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### ABSTRACT:

The decomposition process involves partitioning the Sunlet graph into subgraphs and assigning labels to vertices such that the resulting subgraphs satisfy the supermagic property. This research contributes to the understanding of graph decomposition techniques and their applications in network design and optimization

**Keywords:** Sunlet graph, star, Magic decomposition

### 1. INTRODUCTION:

Graph theory, branch of mathematics concerned with networks of points connected by lines. Graph theory had its beginnings in recreational math problems (Number game) but it has grown into a significant area of mathematical research. Certain problems in physics, chemistry, communication science, computer technology can be formulated as problems in graph theory. Graph theory was first introduced in the 18<sup>th</sup> century by the Swiss mathematician

**Definition 2.34** The Sunlet Graph  $C_n \odot K_1$  is a cycle  $C_n$  with a pendant edge attached to each vertex of cycle  $C_n$ .

The following theorems establish the star vertex supermagic decomposition of sunlet graph.



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## C++ Programming to Solve Bisection Method

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### Abstract:

This paper provides a new method that uses C++ programming to optimize the traditional Bisection Method for discovering numerical roots. We improve both the convergence speed and accuracy of the conventional technique by introducing improvements that take advantage of C++ versatility and simplicity. The implementation combines parallel processing, iterative refining, and dynamic precision adjustment, and shows better performance than traditional methods. The results demonstrate how C++ may advance numerical techniques and provide a more effective solution for root-finding issues.

### 1. Introduction:

In computer mathematics, finding effective and precise numerical techniques for root finding is still a major goal. A basic method for finding the roots of real-valued functions is the Bisection Method; while it is straightforward, it might not be as quick for more intricate calculations. In this research, we explore a novel application of C++ programming to improve the efficiency of the Bisection Method. We illustrate the efficacy of our C++-based improvements by means of extensive experimentation and analysis [2][3], showing higher accuracy and better convergence rates when compared to traditional implementations. This paper highlights the relevance of C++ in promoting computational mathematics and adds to the continuing discussion on using computer languages for numerical approaches.[4]

### 2. BISECTION METHOD: [1]

Let  $f(x)$  be a continuous function defined on  $[a, b]$  such that  $f(a)$  and  $f(b)$  are of opposite signs. Hence one root of the equation  $f(x) = 0$  lies between  $a$  and  $b$ . For definiteness we assume that  $f(a) < 0$  and  $f(b) > 0$ . Bisection method is used to find the root between  $a$  and  $b$  to the desired approximation as follows.[1]





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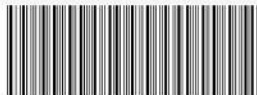
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## MICRO CREDIT AND WOMEN EMPOWERMENT – JOINT LIABILITY GROUP AND SELF HELP GROUP

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### ABSTRACT:

Micro credit programmes usually refer to the objective of reaching small amount of credit and other micro financial services to the poor so as to promote income generating activities. micro finance programmes are those that "extend small loans to poor people for self employment project that generate income allowing to care of themselves, and their families. under this the JLG and SHG - is a new concept i.e., group of rural poor generally comprising of small and marginal farmers, landless labourers, rural artisans, women folk and micro entrepreneurs to achieve socio economic development. This also gives a comparative study between JLG and SHG.

Key words: Joint Liability Groups, Self Help Groups, Women Empowerment.

### INTRODUCTION:

With an aim to provide institutional loans to small farmers NABARD (National Bank for Agricultural and Rural Development) came up with the concept of Joint Liability Groups. This is a similar pattern of SHG where NABARD provides refinance facility to banks for providing loans to small and marginal farmers.

### JOINT LIABILITY GROUP:

Joint liability group consist of an informal group of 4 -10 members who are engaged with the similar business. formed with the purpose of availing loan through the group mechanism against mental guarantee. JLG are usually formed by farmers artisans etc.







## E-MARKETING AND ITS STRATEGIES: DIGITAL OPPORTUNITIES AND CHALLENGES

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### Abstract

One of the most effective and powerful tools for reaching the greatest number of customers is e-marketing, which is the subject of the current article along with its tactics, opportunities, and digital challenges. It also looks at the fundamental ideas behind e-marketing, as well as its characteristics, stages, and mechanisms, as well as the causes of its growth and advantages and disadvantages. The descriptive approach was the basis for the study. The research's most significant conclusions were that, in order to effectively apply e-marketing, a suitable digital environment must be provided; that e-marketing is now a necessity due to the widespread use of e-management and the Internet; and that the effectiveness of e-marketing depends on precise, well-researched strategies. The study also made it clear that using e-marketing techniques offers a variety of benefits, including gaining a competitive edge and a key position in the industry. Additionally, it has demonstrated that even though e-marketing works, there are still a lot of obstacles to overcome in order to counteract the detrimental effects of building client confidence, encouraging them to use their services, and fostering a culture of digital communication.

### Keywords

E-Marketing, Strategies of E-Marketing, Opportunities, Challenges of Marketing, Digital Environment



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## A IMPACT ON DIGITAL MARKETING

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### ABSTRACT


This review paper's goal is to examine the effects of digital marketing and highlight its significance for both advertisers and consumers. This essay starts with an overview of digital marketing before highlighting its various channels, contrasting it with traditional marketing, and discussing its benefits, drawbacks, and significance in the modern world. Marketing is not an exception to the general world's transition from analog to digital. The use of digital marketing, social media marketing, and search engine marketing is growing along with the advancement of technology. Due to its reliance on the internet, digital marketing has benefited the most from the rapid increase in internet users. The purchasing habits of consumers are evolving, and they are increasingly drawn to digital marketing over traditional marketing.

**Keywords**—Digital Marketing, Internet, Online Advertising, Internet Marketing

### INTRODUCTION

Digital marketing is the area of marketing that promotes goods and services by using internet- and online-based digital technology, including mobile phones, desktop computers, and other digital media and platforms. The 1990s and 2000s saw its rise, which altered how companies and brands use technology for marketing. Digital marketing campaigns have become commonplace as people use digital devices more frequently in place of physical stores and as digital platforms are increasingly incorporated into marketing plans. These campaigns leverage a variety of strategies, including search engine optimization (SEO), search engine marketing (SEM), influencer marketing, content automation, campaign marketing, data-driven marketing, e-commerce marketing, social media marketing, e-mail direct marketing, display advertising, e-books, and optical disks and games. Digital marketing include non-Internet channels that offer digital media, including callback, television, mobile phones (SMS and MMS), and cell ring tones for on-hold usage. The difference between online and digital marketing is the expansion to non-Internet outlets.



  
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# The Role of Marketing in Economic Development of Developing Countries

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## ABSTRACT

Determines that the evolution and scope of marketing and its relevance and cost in the improvement procedure are a stimulus to monetary development. Discusses the which means of monetary development and financial growth, modernization, distributive justice and socio-economic transformation. Posits that the criteria or objectives via which development is measured have additionally been broadened. Finalizes that advertising is inextricably linked with economic development as this is normally considered as proper within a world system. Concludes that the want for advertising is always growing as international locations develop, start buying and selling internationally and set up their very own advertising systems.

## ECONOMIC DEVELOPMENT

Economic development is usually understood to suggest an expand in country wide production that end result in an amplify in common per capita gross national product (GNP). An amplify in common per capita GNP alone however is no longer enough to denote the implied or anticipated meaning of financial development. Besides an expand in common per capita GNP, most interpretations of the thought mean a substantial distribution of profits as well. Economic development as in many instances described today, in accordance to Kenen (2000) also tends to imply speedy boom improvement performed "in many years as a substitute than centuries". The strategies of financial improvement among others include industrialization which incidentally, is the quintessential goal of most growing countries. Certainly, most countries see in "economic

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## GREEN HRM: A CUTTING-EDGE STRATEGY FOR SUSTAINABLE ENVIRONMENT

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### Abstract:

Business organizations are becoming more aware of the growing significance of integrating environmental management with human resource management, or "green HRM practices," in recent times. The application of HRM policies to encourage resource sustainability in business organizations and, more broadly, to advance environmental sustainability is known as "green HRM." This paper aims to provide a detailed process model of the HR procedures that are part of green HRM. As a case study, the paper also looks at the kind and scope of Green HRM initiatives carried out by HCL Technologies.

**Keywords:** Green HRM, Sustainable, Green Data Base, Internal Waste Management, CMM.

### Introduction:

In recent times the importance of Environmental issues and Sustainable development has increased both in the developed and developing nations. Growing concern for global environment and the development of international standards for Environmental Management has created a need for businesses to adopt 'green practices'. With these concerns organizations today have become more conscious about the growing importance of the integration of Environmental Management and Human Resource Management i.e. 'Green HRM' Practices. Green HRM is the use of HRM policies to promote the sustainable use of resources within business organizations and more generally, promotes the cause of environmental sustainability. It involves human resource initiatives to endorse sustainable practices and increase employee awareness and commitments on the issues of sustainability.





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# THE EMERGENCE AND SIGNIFICANCE OF CRYPTOCURRENCY IN INDIA

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## ABSTRACT

The technology disruption has created opportunities and challenges for human life. Cryptocurrency is emerging as the alternative medium of exchange. Cryptocurrency is based on the blockchain technology. The paper discusses the concept, framework of cryptocurrency and its implications. The paper draws upon experience based on interactions with people who are concerned with cryptocurrency and published sources. India is emerging as the leading market for cryptocurrency. Predominantly young demographic profile makes India an attractive market. Understanding cryptocurrency is crucial for taking an informed investment decision. This paper attempts to describe cryptocurrency concept for better understanding and better decision making.

**Keywords:** Cryptocurrency, India, Block Chain, Implications, Demography, Investment.

## INTRODUCTION

The global financial crisis of 2008 had highlighted the vulnerability of the banking system. After the global financial crisis of 2008, Bitcoin emerged as an alternative to traditional banking system. Bitcoin is the first cryptocurrency and has attracted the attention of investors and regulators globally. Many people tried to develop digital currency in nineteenth century but attempts could not succeed (Mukhopadhyay et al. 2016). Bitcoin was introduced as a concept in a 2008 paper titled "Bitcoin a peer-to-peer electronic cash system" by the pseudonym Satoshi Nakamoto. The identity of the person is still a mystery. It is a peer-to-peer transaction system (Vejacka, 2014). Bitcoin was made available for public through blockchain in 2009. Bitcoin address is generated after installing bitcoin wallet on your



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# THE GST: A CHANGEABLE STEP INDIA'S PROGRESS TOWARDS TAX REFORM

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## ABSTRACT:

The Goods and Services Tax, or GST, went into force on July 1st, 2017. The Goods and Services Tax (GST) is an indirect tax that has merged nearly all state and federal indirect taxes levied in India into one single tax. The introduction of the Goods and Services Tax (GST) has revolutionised the Indian tax system. This essay emphasised the benefits of the Goods and Services Tax (GST) policy after it was put into place. Secondary data is used in the analysis of the results. The study concluded that the Goods and Services Tax (GST) will enhance tax collection and boost economic growth. However, systematic research is also necessary for its effective implementation.

**Keywords::** Tax, Indiantaxationsystem, Goods and ServiceTax

## Introduction

The government of India levied two different kinds of taxes: indirect taxes and direct taxes. The term "direct tax" refers to taxes, such as income tax, wealth tax, and corporation tax, that the taxpayer pays directly to the government. Instead of taxing income or profits, indirect tax is imposed on goods and services. The term "indirect tax" refers to taxes that are gathered from final customers of goods and services by intermediaries such as retailers rather than being paid directly to the government. Therefore, the ultimate cost of indirect tax is borne by consumers. The central and state governments in India imposed taxes at different points in the supply chain, including the central sales tax, value added tax, excise duty, and octroi. This resulted in a multilayered indirect taxation system. By substituting state government VAT for the sales tax system and central VAT (CENVAT) for the central excise duty, the Indian



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# CHALLENGES AND ISSUES OF MICROFINANCE IN INDIA

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## ABSTRACT

Since India's independence, unemployment and poverty have been two prominent features and challenges. The main reason of the first two has been a lack of adequate credit facilities for the impoverished and unemployed. These two variables have become the most difficult roadblocks in the country's path to long-term growth. The fast-expanding economy is growing the disparity between rich and poor. Microfinance enables the poor to obtain loans that lead to financial independence and growth in order to live a sustainable lifestyle in addition to saving and investing. The poor use these loans productively to start businesses, acquire assets, and get out of poverty once and for all. Microfinance is quickly becoming a popular buzzword in India. Microfinance is an excellent tool for achieving economic growth, sustainable development, and poverty alleviation. This presentation will focus on the problems and suggested solutions for growing microfinance in the Indian setting for long-term development.

**Keywords:** Microfinance, MFIs, Poverty Alleviation, Sustainable growth.

## 1. INTRODUCTION

The first microfinance program was launched in the developing world in the early 1960s, and it first appeared in the United States in the early 1980s. Microfinance has become an essential component of the Indian economy. Rural India's financial needs reflect fluctuating, uncertain, and irregular income and expenditure patterns. Examining their criteria reveals that poor people cherish financial services and expect them to be dependable, convenient, and adaptable. India has a wide range of microfinance organizations, including legitimate



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## DOCKING STUDY ON THIENO QUINOLINES

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### ABSTRACT

In this work, synthesis, antibacterial activities of some new series of substituted quinolines 11,12,13,14 were described. Starting form of 2, 4-dichloro quinolines, new series derivatives has been synthesized by classical methods. Some of these substituted quinolines were tested for Molecular docking study with p53 protein. The synthesized compounds were  $^1\text{H}$ NMR,  $^{13}\text{C}$  NMR and Spectra.

**Keywords:** *Quinolines, Docking study, Thieno compounds*

### 1 INTRODUCTION:

Heterocycles containing nitrogen are important for numerous processes in all living things. Numerous drugs are known to take advantage of heterocyclic systems; they frequently contain nitrogen and have rings with five or six members.

Quinoline derivatives are intriguing molecules in the pharmaceutical field; numerous compounds have been approved for use as analgesics, immunomodulators, anti-leishmanial, anti-neoplastic, anti-fungal, anti-bacterial, anti-inflammatory, neurotropic, vasorelaxing, and antiviral agents. They have been shown to have antiviral, hypocholesterolemic, hypolemic, antifungal, and antiallergenic qualities.

Sulfur-containing heterocyclic compounds are widespread in natural products and synthetic compounds of high utility in pharmaceutical, agrochemical, and materials chemistry the development of new efficient and selective routes to sulfur-containing heterocyclic compounds remains a continuous hot topic in synthesis and industry.

Thieno derivatives are known to exhibit an array of biological activities including analgesic and anti-inflammatory activities. Benzo thienquinolines are sulfur analogues of Cryptolepsissanguinolenta alkaloids and represent interesting target molecules, due to their broad spectrum of antimicrobial, anticancer and cytotoxic activities. It is evident







**STUDY ON THE SYNTHESIS AND CHARACTERIZATION  
OF THE  
TRANSITION METAL COMPLEX OF THE MANNICH BASE  
(BY USING IR SPECTRA)  
(DICYCLOHEXYLAMINO METHYL PHTHALIMIDE)**

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**ABSTRACT**

Mannich bases have a vital role in the development of co-ordination chemistry. Mannich bases offer a versatile and flexible series of ligands capable of binding with various metal ions to give complexes with suitable properties for theoretical or practical applications. Mannich bases are employed as intermediate in chemical synthesis. Mannich base derivatives have been found to be potent drug in medicinal science and possess wide range of biological activities like antibacterial, antimalarial, analgesic, anti-inflammatory, anticonvulsant, anticancer agents, etc

**KEYWORDS:** antibacterial, antimalarial, analgesic, anti-inflammatory, anticonvulsant, anthelmintics, etc.

**I INTRODUCTION**

In general, Mannich reaction consists of the condensation of ammonia or primary/secondary amine, usually as the hydrochloride, with formaldehyde or other aldehyde, and a compound containing at least one hydrogen atom of pronounced reactivity. Mannich bases containing bridged N-atom exhibit pronounced biological activities. The study of mannich reaction attracted a great deal of attention to the chemists because it plays a vital role owing to their wide range of pharmacological and industrial applications. Mannich bases are also employed as intermediate in chemical synthesis. Mannich base derivatives with bridge N-atom have been found to be potent drug in medicinal science and possess wide range of biological activities like antibacterial, antimalarial, analgesic, anti-inflammatory, anticonvulsant, anthelmintics, etc



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**ABSTRACT:**

Mannich bases have a vital role in the development of co-ordination chemistry. Mannich bases offer a versatile and flexible series of ligands capable of binding with various metal ions to give complexes with suitable properties for theoretical or practical applications. Mannich bases are employed as intermediate in chemical synthesis. Mannich base derivatives have been found to be potent drug in medicinal science and possess wide range of biological activities like antibacterial, antimalarial, analgesic, anti-inflammatory, anticonvulsant, anticancer agents, etc. Keeping all these points in view, it is decided to synthesise a novel Mannich base using Phthalimide and a transition metal complex of that ligand. The structure of the synthesized ligand as well as the metal complex were determined by using  $^1\text{H}$  NMR Visible techniques. The results of the spectral are discussed in this report.

**KEYWORDS:** *Phthalimide, Mannich bases, Dicyclohexylamino Methyl Phthalimide, (DCAMP)*

**INTRODUCTION:**

In general, Mannich reaction consists of the condensation of ammonia or primary/secondary amine, usually as the hydrochloride, with formaldehyde or other aldehyde, and a compound containing at least one hydrogen atom of pronounced reactivity. In 1912, Carl Mannich has investigated this reaction. Today, due to its wide Mannich bases containing bridged N-atom exhibit pronounced biological activities. The study of mannich reaction attracted a great deal of attention to the chemists because it plays a vital role owing to their wide range of pharmacological and industrial applications. Mannich bases are also employed as intermediate in chemical synthesis. Mannich base derivatives with bridge N-atom have been found to be potent drug in medicinal science and possess wide range of biological activities like antibacterial, antimalarial, analgesic, anti-inflammatory, anticonvulsant, anthelmintics, etc.



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## Nanoparticle synthesis and characterisation of cobalt oxide ( $\text{Co}_3\text{O}_4$ )

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### ABSTRACT:

The preparation of  $\text{Co}_3\text{O}_4$  nanoparticles by simple household microwave irradiation method without employing hydrothermal process and to study their structural, morphological and electrochemical properties of the nanoparticles. The Synthesis  $\text{Co}_3\text{O}_4$  nanoparticles by microwave technique. The crystalline nature, the phase purity, average crystalline size by powder X-ray diffraction (XRD) technique, the functional group can be identified by FT-Raman spectra analysis, the surface morphology and average particle size of the Nanoparticles studied by transmission electron microscope (TEM) analysis, the elemental composition using EDS, the electrochemical nature by using CV analysis.

**KEYWORDS:** *Hydrothermal, supercapacitor, cobalt oxide.*

### 1. INTRODUCTION:

A great deal of interest in metal oxide nanoparticles has led to the synthesis of many metal oxide nanoparticles with striking properties[1-3]. Metal oxide nanoparticles have been employed in a variety of applications during the past few decades, including fuel cells, sensors, energy storage devices, piezoelectric devices, and microelectronic circuits. It has been demonstrated that metal oxide nanoparticles are good supercapacitor candidates[12]. Cobalt oxide nanoparticles appear as a white powder with spinel crystal structure. They are an important magnetic material, and are P-type semiconductors. When nano-cobalt oxide is exposed to the hydrogen flame and heated to  $900^\circ\text{C}$  ( $1652^\circ\text{F}$ ), it changes into metal cobalt[17].

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## CRYSTALLOGRAPHIC AND MORPHOLOGICAL PROPERTIES ON BISMUTH OXIDE ( $\text{Bi}_2\text{O}_3$ ) NANOPARTICLES

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### Abstract

The Bismuth Oxide ( $\text{Bi}_2\text{O}_3$ ) nanoparticles have been successfully prepared by co-precipitation method. The crystallite size and morphology of Bismuth Oxide ( $\text{Bi}_2\text{O}_3$ ) have been investigated by X-Ray diffraction (XRD), Fourier transform infrared spectroscopy (FT-IR), scanning electron microscopy (SEM), techniques. Results obtained indicate that the co-precipitation method is a promising low temperature, cheap, and fast method for the production of Bismuth Oxide ( $\text{Bi}_2\text{O}_3$ ) nanostructures.

### KEY WORDS:

*co-precipitation method , morphology of Bismuth Oxide , Bismuth Oxide ( $\text{Bi}_2\text{O}_3$ ) nanostructures.*

### 1. INTRODUCTION TO BISMUTH OXIDE ( $\text{Bi}_2\text{O}_3$ )

Bismuth is a chemical element with symbol Bi and atomic number 83. Bismuth, a pentavalent post-transition metal, chemically resembles arsenic and antimony. Elemental bismuth may occur naturally, although its sulfide and oxide form important commercial ores. The free element is 86% as dense as lead [1]. It is a brittle metal with a silvery white color when freshly produced, but is often seen in air with a pink tinge owing to surface oxidation. Bismuth is the most naturally diamagnetic element, and has one of the lowest values of thermal conductivity among metals.

Bismuth metal has been known since ancient times, although until the 18th century it was often confused with lead and tin, which share some physical properties. The etymology is uncertain, but possibly comes from Arabic bi ismid, meaning having the properties of antimony<sup>[3]</sup> or German words weisse masse or wismuth ("white mass"), translated in the mid-sixteenth century to New Latin bisemutum.

Bismuth has long been considered as the element with the highest atomic mass that is stable. However, in 2003 it was discovered to be weakly radioactive: its only primordial isotope, bismuth-209, decays via alpha decay with a half life more than a billion times the estimated age of the universe<sup>1</sup> Bismuth compounds account for about half the production of bismuth.





## About Conference

International Conference on Current Research Trends in Engineering, Science & Management (ICCRATESM-2021) is a global event organised by Sambhram Institute of Technology (SaIT) Bangalore, (Affiliated to Visvesvaraya Technological University, Recognized by Government of Karnataka, Approved by AICTE) in association with International Association of Research and Developed Organization (IARDO) & Conference World conducted through Google meet. This conference provides an international forum for researchers, developers, engineers and practitioners who are involved in real time projects that provide solutions to exchange their valuable ideas and showcase the ongoing works which may lead to path breaking foundation of the futuristic engineering. It accentuates indispensability of interdisciplinary and cross – linked thinking with respect of innovation and market opportunities. Accepted paper will be published in International Journal with ISSN Approved by UGC. Selected papers will be published in Scopus Index Journals. All Accepted papers will be published in Conference proceeding having ISBN.

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# Navigating Business Challenges: Advancements in Robotics for Enhanced Quality and Productivity in dtec.bw Initiatives

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## Abstract

Changing market demands and labour shortages are only two of the many difficulties that businesses face today. Since robots are essential components of industrial automation, the need for their use in addressing these issues is only increasing. In some applications, robots can improve quality and productivity. This article outlines contemporary robotics developments that are being investigated and applied in several dtec.bw initiatives. Further developments are summarized and lightweight and mobile robots are introduced in addition to the well-known industrial robots.

**Keywords:** Unmanned Aerial Vehicles, Modular Robotics, Industrial Robots, Lightweight Robots, Mobile Robots

## I Introduction

Robots have become an essential component of today's industrial environment, usually assisting people in monotonous, hazardous, or unergonomic jobs. Robots can deliver a variety of benefits that humans are unable to match, depending on the type of machine. They are able to move quickly and precisely while delivering consistently excellent work. In light of current issues including the lack of skilled labour and shifting consumer preferences, robots is playing a bigger role in determining corporate success. Here, a number of research initiatives under the auspices of the "Centre for Digitization and Technology Research of the German Armed Forces" (dtec.bw) try to make it easier for robots to be integrated into the industrial sector. The purpose of this study is to shed light on the robotics trends being investigated in the various dtec.bw research programmes.

The format of the paper is as follows. The following section outlines current robotics developments that are further investigated in the dtec.bw research projects, along with a discussion of their benefits and drawbacks. This study examines three trends in robotics: mobile robots, lightweight robots, and established industrial robots. Other trends are also outlined, such as modular robotics and drones. The paper ends with a synopsis and future directions.



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# Predicting Heart Disease with Machine Learning Algorithms

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## **Abstract:**

The heart is an important organ in living things. The diagnosis and prognosis of heart-related disorders necessitate greater accuracy, perfection, and precision because even a small error can result in exhaustion or even death; the number of heart-related deaths is growing dramatically every day. In order to address the issue, a prediction system for disease awareness is vital. The area of artificial intelligence (AI) that deals with machine learning offers esteemed assistance in forecasting any type of occurrence which learn from the natural world. In this paper, we use the UCI repository dataset for training and testing to determine the accuracy of machine learning algorithms for heart disease prediction. The methods include k-nearest neighbour, decision tree, linear regression, and support vector machine (SVM). The Anaconda (jupyter) notebook is the ideal tool for implementing Python programming; it has a variety of libraries and header files that improve the accuracy and precision of the work.

**Keywords**—supervised; unsupervised; reinforced; linear regression; decision tree; python programming; jupyter Notebook; confusion matrix.


## **I. Introduction**

The heart is one of the body's largest and most important organs, heart care is crucial. Since most diseases are heart-related, it is necessary to predict heart diseases; for this purpose, comparative studies are required in this field. Additionally, since most patients today die from diseases that were discovered too late due to instrument accuracy issues, it is necessary to understand more effective algorithms for predicting diseases.

One of the more effective technologies for testing that relies on training and testing is machine learning. Machine learning is a subset of artificial intelligence (AI), a large field of study that focuses on creating machines that mimic human abilities. However, machine learning systems are trained to process and utilise data; for this reason, the combination of these two technologies is sometimes known



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# A COMPREHENSIVE SURVEY OF IOT ARCHITECTURES

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## **Abstract:**

The term "Internet Of Things" (IoT) refers to a widely dispersed network of things in which sensors and RFID tagging systems are used to transmit all data to the Internet. This paper's primary goal is to examine the various IoT designs using a layered approach and the RFC perspective. Devices can speak with one another directly inside the same network, indirectly through gateway applications, through cloud services, or even through a third party that facilitates data collection and analysis. An architecture with five layers is the best option in terms of compatibility and security. It is noted that more attention needs to be paid to interoperability and standardization in all of the designs that have been addressed, as these are crucial for security characteristics.

**Keywords:** *Applications, Architecture, Internet of Things*

## **I. INTRODUCTION:**


The networked connectivity of common objects is referred to as the Internet of Things (IoT), sometimes known as the Internet of Objects. This is typically understood to be a wireless network of sensors that is self-configuring to interconnect everything [1]. In 1999, Kevin Ashton first used the term "Internet of Things." He employed IoT for RFID devices in inventory systems. The Internet of Things (IoT) is made up of billions of end devices, ranging from highly performant cloud platforms and gateways to the smallest, most efficient linked end nodes.

Trillions of things can have unique identification with the aid of the 128-bit IPv6 addressing system and Radio Frequency Identification (RFID) for managing objects[2].

Resource-rich and resource-constrained IoT devices are the two categories into which they fall. Resources-constrained devices, such as microcontroller-based devices, sensors, and actuators, lack the necessary hardware and software capabilities to support TCP/IP protocol, whereas resource-rich devices, such as servers, standard personal computers, and smartphones, have enough hardware,



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# A SEMANTIC WEB-BASED PERUSAL INFORMATION RESURGANCE

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**Abstract** - The Information retrieval systems based entirely on syntactic contents have serious limitation. In order to achieve high precision and recall on information systems, the incorporation of natural language processing technique that provide semantic information is needed. For this reason, by determining the semantic for the constitutes of documents a clustering method is presented in this paper. The goal is to find the conjoined point which can combine the both textual part and visual part and to use for information system. It can help to well extract the meaning of a term.

**Keywords:** *Semantic Web, Clustering, Vector-Space Model, Discrete Cosine Transform, Fuzzy Domain Ontology*

## I. INTRODUCTION

The goal of Information Retrieval system is to search the documents which user wants to obtain in a fast and efficient way. If there is an information retrieval system that comprehends the semantic content of documents and reflects the preferences of user, it can be very helpful to search the information on the internet and to improve the performance of the existing system. Because the Information retrieval system must interpret the contents of information items or documents in a collection and rank them according to the degree of relevance to the user query, the representation of document contents and the user preference are important factors in the retrieval process. Semantic web process and clustering provides a common framework that allows data to be shared and reused across applications, enterprise etc.

## II. WEB SERVICE

A web service [6] is a self-describing software program using self-contained applications and identified by a Uniform Resource Identifier (URI), used to share information between applications over the Internet. Access to and retrieval of information from the Web occurs via the HTTP protocol. One of the first languages to have been used for the internet is HTML, a markup language used to describe the document structure. The Web can be conceived as a huge library containing a large amount of information or data – unfortunately without any sensible means of representation. The common Web service scenario [6] can be described by



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# **Analytics of Google Web Pages Using HITS Algorithm and Enhanced Normalization Method**

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## **ABSTRACT**

An essential part of an information retrieval system is page ranking. It is employed to gauge the significance and functionality of web pages. We go over the HITS concept and the Page Rank algorithm as two ranking strategies. In order to determine the significance of the Web pages, both methods concentrate on the Web's link structure. Each web page's rank is determined by the Page Rank algorithm, while the authority framework and hubs are the foundation for Hypertext Induced Topic Search (HITS). For web retrieval, a quick and effective page ranking system is still a challenge. This study presented a novel page rank algorithm that employs a normalization method based on the average page rank value. The proposed scheme reduces the time complexity of the traditional Page Rank algorithm by reducing the number of iterations to reach a convergence point.

**Keywords - Search Engine, Page Rank, HITS, PHITS, Normalization.**

## **I. INTRODUCTION**


A wealth of hyperlinked, heterogeneous information, including text, audio, video, and metadata, can be found on the World Wide Web. The size of WWW is thought to double every six to ten months. It is challenging to manage the information on the web due to the World Wide Web's rapid expansion of information resources. Search engines are "programs" that look for certain keywords in documents and then provide a list of the documents that contain those keywords. Typically, a list of results known as search engine results pages (SERPs) displays the search results.

PageRank is an algorithm for analyzing links that uses a web graph to determine a numerical weighting. The largest source of data is, as we all know, the internet. The World Wide Web has emerged as the most widely used medium for communication and information sharing in recent years. It provides a forum for the exchange of many types of information, including software, research papers, educational materials, multimedia, and personal diaries. Due to the World Wide Web's rapid expansion of information, users must employ automated tools to track and analyze their usage patterns as well as locate the information resources they need.

Thus the internet is an infinite source of information which includes massive collection of web pages and countless hyperlinks. These hyperlinks contain a huge amount of concealed human explanation that can be extremely valuable for automatically inferring concept of authority. Thus the structure of a typical Web graph (Figure 1) consists of web pages as nodes, and hyperlinks as edges connecting two related pages.



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## A Wi-Fi Enabled Android Smart ID System with Fingerprint Authentication

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**ABSTRACT—** In this paper, we plan a framework that takes employees attendance and the attendance records are kept up naturally in an association. Utilizing smart phones like Android Technology the association will have the option to gauge participation effectively by our structured versatile application. The principle objective is, on a keen participation framework where an android gadget will be utilized as a savvy ID card. Likewise, the whole working spot will be a Wi-Fi zone. Along these lines, the association or detachment of the android gadget(Smart ID card) to the switch will decide if a worker is available in the working spot or not. A counter will be there into the framework to tally the aggregate sum of time a representative spends in the working spot. The top-level plan of the framework incorporates stamping participation with the assistance of a unique mark sensor module and the remote correspondence innovation of advanced mobile phone empowers the data to move from the present customer to a remote database server, any place the system extends is accessible. The versatile application we have endeavoured to construct will require interfacing with the web through Wi-Fi (Wireless Fidelity) innovation. In the first place, a representative should be enlisted in the unique mark sensor module and the switch. Representatives will initially need to pursue this and afterward, they can enlist their participation by first signing in with the assistance of a cell phone to the server. In this application, new representatives subtleties can enlist, erase data about a specific worker, alter some data and so on.

**Keywords—** AES, Android, Fingerprint sensor module, Smart phones, Web Server, Wi-Fi, Mobile application.

### 1.INTRODUCTION

These days, nearly every institution or organization uses very basic methods for tracking attendance and recording working hours. affiliation. Usually, there are two types of the accessible attendance framework.

1) Manual; 2) Automatic.

The framework for the manual comprises the application of paper or book pages when recording attendance, the employee conclude, and managers give the order for precision Because sheets could get damaged or lost, this method might be flawed. Furthermore, the extraction of relevant data as well as the handbook The computation of working time is extremely tiresome. It requires an extra employee to Verify the worker's status and the timing of various workers, which includes overhead costs for the organization. Biometrics are defined as any ensuing quantitative, potent, and specific physical characteristics or unique quality that can be used to identify a person or validate the assertiveness in a person's personality.

Furthermore, it is the science and[1] invention of verification through the estimation of individuals' physiological or characteristics of behavior. An unusual digit impression scanner will be used to

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## GeoMob: Fortifying Mobile Banking Security through Geolocation-Driven Authentication

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### ABSTRACT

Almost every phone customer mentions online banking as an important position as banks provide loans to their customers through online banking. Convenient banking with customizable programs remains web banking. There is no need to focus on mobile device security, as threats to mobile phones are the same as those to PCs. Among the few verification schemes, geolocation verification is generally considered logical for mobile phones and is therefore becoming increasingly important. In this article, we plan and build a secure, resource-rich, and portable finance program for GeoMob that leverages comprehensive authentication. GeoMob's geolocation-based verification of places of interest ensures flexible exchange security depending on the customer's region. Current two-factor authentication aims to use customer IDs, passwords, and OTPs, while convenient numbers and locations are used to verify customers. Geolocation provides information about the bank's area where the exchange takes place, allowing the bank to ensure a secure transaction. There are no restrictions on the use of GSM as client geolocation is performed by the system provider. The various validations used by GeoMob ensure security when performing portable exchanges and protect users from various attacks.

**Keywords:** Authentication, Geo-Location, Location Browser, Mobile Banking, Two-factor Authentication and Security.

### I. INTRODUCTION

Mobile phones offer a variety of ways to access services, including versatile applications, portable programs, and even gadgets. How a company approaches its customers depends on its decisions. Although portable applications are commonly used by clients, versatile programs have their importance. A versatile program is a program that allows a customer to view his website on a portable device, and a portable application or application must be downloaded onto the customer's mobile phone so that it can be used at any time after downloading. It's a program. Although multifunctional applications are the easiest way to get help, portable programs are preferred for accessing various services because they have certain advantages in contrast to multifunctional applications. A versatile program called a "smaller than usual" program, miniature program, or remote Internet program (WIB) is an Internet browser for mobile phones and tablets. They are specifically structured to display web content on small screens. Typical portable programs include Google Chrome, Iris, Mozilla Firefox, Arouse, Apple Safari, Opera, Internet Explorer, Maxthon, Blackberry, and UC Program. Diverse financial situations pose several risks. The unparalleled availability of the Internet through mobile phones has paved the way for several attacks, including mainline attacks, phishing attacks, etc., making security an important factor to consider when providing services to users. (A.H. Srinivasa Rao, 2019).

At this time, you should also protect yourself from attacks on the printed private key that you use to calculate the quote to make the offer after the confirmation phase. In the joint calculation, the applicant's grade serves as information and is created in such a way that it is divided into different





## Policy Enforcement for Big Data security

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### **Abstract—**

Security and privacy of big data becomes challenging as data grows and more accessible by more and more clients. Large-scale data storage is becoming a necessity for healthcare, business segments, government departments, scientific endeavors and individuals. Our research will focus on the privacy, security and how we can make sure that big data is secured. Managing security policy is a challenge that our framework will handle for big data. Privacy policy needs to be integrated, flexible, context-aware and customizable. We will build a framework to receive data from customer and then analyze data received, extract privacy policy and then identify the sensitive data. In this paper we will present the techniques for privacy policy which will be created to be used in our framework.

**Keywords—** *privacy; big data; security; policy*

### **I. INTRODUCTION**

Big Data is a new direction of technology in science, government, industry and business [1]. The size of the datasets for big data is beyond the capabilities of typical databases software to handle and manage for capturing, storing, and analyzing data. The idea was limited to the current technology available during those times of processing and storage of huge volume of data. Data is always the most important resource in our society. For example, government agencies are collecting information that contains private data. Big data security has grown fast as a significant concern for clients over the past few years. 88% of the clients were substantially worried on their data privacy [2]. The security issues are increasing and it is happening because of the increasing usage of big data through adaptation of this technology. There are many benefits of big data. Although, it is vulnerable to attacks. Attackers are consistently trying to find loopholes to attack the big data storage.

Velocity, volume and variety of data magnify the big data [3]. Volume of data is increasing every second from different input resources. Big Data is huge volume of data that is structured or unstructured and it is very difficult to handle by normal databases technologies and software tools [4]. The exponential growth in volume of data with the speed of data gathering and processing for data inputs coming from large implementation of massive connected devices such as; cars, smartphones, RFID



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## **A VANET Implementation Using Wireless Sensor Networks and Analysis of Security Attacks on VANET**

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### **ABSTRACT:**

The reason for traffic and the frequent accidents is the sharp rise in the number of automobiles. Thus, the way to lessen these occurrences is through the use of wireless sensor networks. The implementation of the WSN (Vehicular Ad Hoc Network) to gather and disseminate safety information has the potential to significantly lower the frequency of accidents by alerting drivers to potential hazards before they arise. These networks are made up of the sensors and On-Board Units that are mounted on the roadside and within the vehicle. The driver is alerted to information about other vehicles' positions, speeds, and other details based on data gathered from the sensors on their vehicles. Increasing driving safety is the primary goal of the vehicular Ad Hoc network.

VANET provides users with apps that are both safe and non-safe, but in order to establish a wireless environment, security is required. Because VANET nodes are mobile, their infrastructure is not set for vehicles. Because it supports both safe and unsafe wireless applications, security is VANET's top priority.

This research examines how to use wireless sensor networks to create VANETs and examines different VANET attacks.

**KEYWORDS:** Wireless Sensor Networks (WSN), Ad Hoc Networks, Mobile Ad Hoc Networks (MANET), Vehicular Ad Hoc Networks (VANET), Types of attacks, VANET security requirements.

### **I. INTRODUCTION**

According to the National Highway Traffic Safety Administration (NHTSA), there has been a sharp rise in auto accidents. This has inspired researchers in the academic and industrial sectors to find a solution. On the other hand, a lot of study has been done on vehicular networks recently. Wireless communication and the automobile industry have recently seen significant advancements, making them the most promising areas for research.

Mobile Ad Hoc networks (MANETs), which provide communication between adjacent vehicles and roadside equipment, include VANETs that use vehicle mobile nodes. However, the network's characteristics are entirely distinct from those of other networks. Particularly when relocating the nodes (vehicles) within the VANET restricted to road topology, allowing us to forecast the position of the vehicle based on the information available about the road. However, potential vast scale and high mobility are two of VANET's few characteristics. VANET's appealing features have attracted the attention of industry and academia alike.



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## Future-Proofing Wireless Sensor Networks: A Security Perspective with SNEP and $\mu$ TESLA

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**Abstract** - Wireless sensor networks (WSNs) have become more prevalent as a result of the quick advancements in wireless communication, sensor technology, and embedded computing. Wireless sensor networks are widely used in civil, military, commercial, and other fields due to their low cost and adaptability. But unlike traditional networks, wireless sensor networks are more vulnerable to security threats because the sensor node's ability to calculate its capacity, battery capacity, and storage capacity is limited by the intrinsic features of sensor networks. In the future, when wireless sensor networks are widely used, security concerns will take centre stage. SNEP and  $\mu$ TESLA are the two secure building blocks of SPINS. Evidence of data freshness, two-party data authentication, and data confidentiality are all included in the SNEP. For environments with limited resources,  $\mu$ TESLA offers broadcast. The protocol suite's performance readily keeps up with our network's data rate.

**Keywords:** Secure Communication Protocols, Sensor Network, Authentication of Wireless Communication, WSN, Security, Threats, and Security Protocols.

### 1. INTRODUCTION

Wireless Sensor Networks (WSNs) are devices that gather sensed data—such as temperature, pressure, humidity, level, and movement—from the outside world in accordance with specific requirements. The gateway provides the sink with access to this data. Due to their wireless nature, sensors are widely used and can function well in a variety of environments. Sensor nodes are placed randomly, but it's still crucial to place them carefully. We envision a world in which self-organizing wireless networks are formed by thousands to millions of tiny sensors. What security measures can we take for these sensor networks? Security is difficult; there are many more obstacles than there are with traditional desktop computers.

These sensors will only have a certain amount of energy, bandwidth, storage, and processing power. A network that is too large may become inefficient due to increased interference and clashing between nodes, while a network with too few nodes may have coverage issues. Ensuring security is crucial when transmitting data over a network. The hardest task in WSN is arguably security because it is difficult to constantly monitor the network and sensor nodes. However, it needs to be secured to stop an attacker from attacking the data transmission.

SECURITY	APPLICATION
	TRANSPORT
	NETWORK
	LINK
	PHYSICAL



## TRENDS IN CLOUD COMPUTING: A REVIEW

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### Abstract

This study reviews the literature on cloud computing trends, which are among the computer industry's fastest-growing technologies, and the advantages and opportunities they present for all kinds of businesses. Furthermore, it tackles the issues and difficulties that lead to a rise in the quantity of clients eager to embrace and utilize the technology. The study used a mixed research methodology, which involves gathering and evaluating quantitative and qualitative data within the same literature review and synthesizing the results of earlier, related investigations. Results introduces readers to the difficulties and issues related to cloud computing while highlighting the trends in cloud computing both now and in the future. The literature study indicated that the technology is projected to increase in the future and shows promise. Numerous methods have been put forth by researchers to solve the issues and difficulties associated with cloud computing, including privacy and security threats, mobile cloud computing, and cloud computing governance.

**Keywords:** cloud governance, cloud computing trends, and cloud computing problems

### 1. Overview

Businesses have spent decades trying to preserve and safeguard data in order to safeguard the private information of their clients. Cloud computing was created by businesses to give businesses and private persons access to safe data storage and processing capacity. Cloud storage is used by many businesses across several industries (Mei, Li, & Li, 2017). Internet technology is used in cloud computing, also known as just computing, for dynamic applications and storage. Armbrust, Fox, Griffith, Joseph, Katz, Konwinski, & Zaharia (2010) identified five key features of cloud computing: resource pooling, quick flexibility, on-demand self-service, wide network access, and measured service. Furthermore, according to Mell and Grance (2011), cloud computing encompasses three main categories of services: software as a service, platform as a service, and infrastructure as a service. In addition, cloud computing can be utilized in four different ways: public, private, communal, and hybrid clouds. The availability of processing power, storage, flexibility, scalability, and lower overhead costs for the IT infrastructure are benefits of cloud computing (Rajaraman, 2014). Cloud computing has become appealing while cutting IT expenses because startup organizations have been

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**A TWO DAY INTERNATIONAL VIRTUAL CONFERENCE ON RELIGIOUS  
AND POLITICAL PERSPECTIVES IN  
ENGLISH LITERATURE**

**Editors**

**Dr.N.Gunasekaran**

**Dr. R.Sivakumar**

**Date: 08.04.2021 & 09.04.2021**

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**RIISING FROM THE DEAD: MYTH AS CULTURAL IDENTITY AND  
PSYCHOLOGICAL RESILIENCE IN ARUNI KASHYAP'S "SKYLARK GIRL"**

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**Abstract**

The myths are the symbolic narratives of the ideologies of a community. Aruni Kashyap is an Assamese writer who is proud and responsible for delineating his underrepresented native identity. Assam is a place known for "Skylark Girl" is one of the short stories of his collection *His Father's Disease*. The retelling of Skylark Girl, the popular myth of Assam recapitulates the rebirth of Tejimola in various forms. The age-old tale emphasises the cultural pride of Assam for generations together holding up the wisdom of psychological resilience. The story of the suppressed leaf-girl exhibits the psychological resilience of the innocent girl in spite of the harassment of her stepmother. She remains resolute amidst conflicts and oppression when she was alive and even more determined when she was buried. Her metamorphosis as gourd plant, lime tree, lotus, skylark proves that conventional myths of culture pass substantial virtues mixed with elements of wonder for the successors. The happy life of Tejimola after a long struggle remarks the optimistic spirit and hope to survive beyond human forms. Kashyap in his writing celebrates his cultural ethos staying away for a while from the socio-political turmoil of the soil. Henceforth, the voice of the native soil incorporates the morality of Assamese tradition and the undeniable fact that goodness and justice will prevail forever.

**Keywords:** Culture, myth, resilience, identity, skylark, Tejimola

Aruni Kashyap, a bilingual writer in Assamese and English is a professor of Creative Writing at the University of Georgia. His contributions to the literary world include *The House with a Thousand Stories* (2013), a translation of Indira Goswami's last fiction *The Bronze Sword of Thengphakhri Tehsildar* (2013), an Assamese novel *Noikhon Etia Duroit* (2019), *How to tell a story of an Insurgency* (2020) and *There is no Good Time for Bad News: Poems* (2021). Aruni Kashyap in an interview claims his position as an Assamese writer rather than an Indian writer in English. The rich tradition of his culture back to the fifth-century intellectuals like Sankardar, Aai Padmapriya influenced him to enjoy the native spirit of storytelling. Kashyap has always loved the fable of Tejimola just like the entire community of Assam holding on to the spirit to never give up on life. Writing to him is like an art that reaches perfection by practice. He says, "I am more interested in the absolute wonderful possibilities of human beings, and how interesting they are, and how problematic they are, and how contradictory they are. This is what is interesting to me as a fiction writer" (Chakkar).

Kashyap concentrates on the North-eastern aesthetics and indigenous identity derived from his observation and experiences. He considers Louise Erdrich, the American tribal author as his mentor. To *Tribune* interview, Kashyap says, "My fiction is shaped by Assamese politics, aesthetics and literary traditions — both oral and textual. I use these to write about fundamental aspects of contemporary Indian reality that have been ignored by Indian English fiction for a long time". "Skylark Girl" is the first of the ten short stories of the collection *His Father's*



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# POPULATION AND INDIAN ECONOMIC DEVELOPMENT

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## INTRODUCTION:

In his 1798 essay, *An Essay on the Principle of Population*, Thomas Robert Malthus proposed that a large population is a problem for nations because human population growth is geometric while food resources grow arithmetically. That theory has been thoroughly debunked three centuries later because it ignores technological advancements in agriculture and human resourcefulness, which have allowed people to improve their lot in life—albeit very unevenly—despite growing populations. This is demonstrated by the fact that global human development indicators have improved since three centuries ago.

According to the demographic transition theory, communities' populations go through three distinct phases: high birth and death rates in the first phase, low birth and death rates in the second phase (when the population grows), and low birth and death rates in the third phase

## POPULATION AND INDIA

It could, for example, strengthen India's claim to a permanent seat in the UN Security Council, which has five permanent members, including China.

India is a founding member of the UN and has always insisted that its claim to a permanent seat is just. "I think you have certain claims on things by being the



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## IMPACT OF ADVERTISEMENT ON CONSUMER BEHAVIOR

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### ABSTRACT

Marketers employ diverse media channels to sway consumer actions and uphold client allegiance within the industry. In this regard, it is crucial to remember that different media platform advertisements convey varying amounts of information about the products. This encourages the customer to become interested in the goods that businesses sell. In today's market, changes in consumer behavior are closely linked to digitalization. Therefore, in order to establish a good rapport with the customers in the market, it is necessary to investigate how advertisements influence consumer behavior. This paper's primary focus is on how advertisements affect consumer behavior. An online survey served as the main means of gathering data for this study. The information utilized in this study came from one hundred online users. diverse ages and educational backgrounds; gender parity was also taken into account.

In addition, the study used statistical methods to examine the information gathered. The study's findings indicate that changes in consumer behavior are linked to advertisements, including those found in newspapers. Additionally, it has been discovered that television and internet commercials affect consumer behavior by providing them with a means of obtaining a comprehensive comprehension of the types of goods that are offered in the market. Based on the gathered data, marketers have made investments in newspaper and magazine advertisements in an attempt to influence consumer behavior and win them over to the



## AN OVERVIEW OF MUTUAL FUNDS

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### ABSTRACT

The entirety of the mutual fund industry in India is the subject of this essay. A mutual fund, sometimes referred to as an investment firm, is a type of investment vehicle that combines the capital of numerous investors. In 1924, three executives from Boston pooled their funds without realizing the assembly would become so successful. The creativeness of the Indian government and the establishment of the Unit Trust of the Bank of India in 1963. Because of its large corpus, diversification is possible, reducing risks and optimizing profits. The money raised is used by the fund manager to buy securities like bonds and stocks. The portfolio of the fund is the name given to the securities that were acquired. The performance of various mutual fund categories in India was analyzed and compared in this study, which came to the conclusion that equities funds perform better than income funds. The results of this study also indicate that while institutional fund managers and equity fund managers are capable of timing their investments, brokers-operated funds did not demonstrate this skill. Additionally, empirical research has shown that fund managers have a strong capacity to time their investments in accordance with market conditions.

**Keywords:** Mutual Fund Industry, India, EquityFund, Money Market, Mutual Fund, Return, Risk, Diversification etc.

### 1. INTRODUCTION

A mutual fund is an investment firm that invests in a range of securities, including stocks, bonds, and money market instruments, by pooling the capital of its owners. The majority of open-end mutual funds constantly add additional shares to their investor pool. Mutual funds use a pooled amount of investor capital to achieve their declared investing goal. Mutual funds are prepared to sell or redeem their shares at any moment for the current net asset value of the



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## ONLINE MARKETING: IMPACT ON SOCIETY

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### ABSTRACT

Online advertising is leveraging the unique abilities of new interactive media to create new structure of interactions and transaction between customers and marketers. Also it can be considered as innovative way of advertising in digital marketplace which includes on line advertising, online market research, online promotions and online pricing models. To make it successful there is specific strategy such as Targeting, Product Strategy, Pricing strategy, Distribution approach and promotional strategy. This paper tries to pick out and analyze the benefits and hazards of on line marketing over common marketing. It additionally focuses to perceive that how organizations can be benefited with this. This paper also tries to decide the have an effect on of on-line marketing on standard market and society.

### INTRODUCTION

E-Business is a natural extension of the internet. The thought refers to the transaction of business through an digital means, typically the internet or any of its mediums. E-business has positive characteristics which encompass internet, statistics system for coping with its enterprise process, an online selling platform, Business models that work to bring together facts on more than a few customer and market segments and then make this statistics handy events for a rate and on line economic exchange facility.

E-marketing is a subset of e-business. It is the potential through which a commercial enterprise promotes the merchandise or offerings that it is offering on the internet. The exercise of going for walks an corporation on the internet and advertising its services or products the use of e-marketing tools or resources affords enterprise with wonderful advantages. . E-marketing have to be defined to include the management of the consumer's on-line ride of the product; from first come across via buy to delivery and beyond.



# AN ANALYSIS OF THE CONSEQUENCES OF USING GREEN HRM IN CORPORATE ORGANIZATIONS WITH PARTICULAR REFERENCE TO DEVELOPING COUNTRIES

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## Abstract


Green human resource management (GHRM) is crucial for organizations to achieve environmental sustainability, especially in developing nations. Some organizations have already incorporated GHRM into their HRM procedures, including recruitment, training, performance management, remuneration, participation, and organizational culture management. This paper suggests further study in this area, as it is still a novel idea in the HRM field.

**Keywords:** GHRM, company, green policies, business, company, sustainability, and corporate social responsibility

## Introduction:

**The Reason Behind Green HRM** Consumers are aware of and concerned about companies that pursue and support initiatives centered around "going green" by implementing environmental management strategies. Many businesses, both in developed and developing nations, have adopted the concept of GHRM because HRM activities are thought to be one of the main drivers towards the achievement of business sustainability goals (Ahmad, 2015). The term "green human resource management" (GHRM) refers to the application of HRM policies that have as their main goal encouraging resource sustainability within business organizations and guaranteeing the advancement of environmental sustainability. The systemic, planned alignment of standard HRM procedures with the organization's environmental objectives is known as "green HRM" (Jabbour, 2013). Every business entity



  
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## **THE TRANSFORMATIVE IMPACT OF THE DIGITAL REVOLUTION ON CONSUMER RELATIONSHIPS AND MARKETING STRATEGIES FOR ENTERPRISES.**

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### **ABSTRACT**

Digital revolution has changed the companies' approach to a consumer drastically. Thanks to the Internet, a consumer is capable of analysing a price, according to circulating opinions, and sometimes even of dictating it. Development of digital technologies has led to emergence of a cyber-consumer and cyber-business. Digital revolution enables implementation of new models of relationships with consumers, what is a challenge for enterprises, which are willing to increase their market share. Smart phones and social media exerted certain impact on dynamic development of a digital marketing. Therefore, manners of reaching potential clients through mobile phones and social networks are current communication channels, which can build a relationship with a customer, thus increasing sales. In the article, the author presented the essence of digital marketing together with its assets, which can be of no meaning for an enterprise, which is planning to cut on the customer service costs, hence improving profits and optimizing the sales processes.

**Key words:** Digital marketing, marketing, management, digital, Technology.

### **INTRODUCTION**

Media revolution is most visible in the field of marketing. At present, marketing cannot be considered as a "customer-haunt". Today, the marketing role is to fulfil the consumer's curiosity through transparent and valuable contents. Improvement in significance of digital marketing in enterprises results from a growing number of Internet users, therefore providing a perfect place of marketing operations. Enterprises that understand the power of digital technologies, which enable interactive relations between a brand and a customer, and which will keep on implementing the digital marketing into their strategies, may reduce e.g. the costs of service, logistics, and increase



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## An Analysis of Organizational Employee Motivation

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### ABSTRACT

The most important element in enhancing an association's potential is employee motivation. Every organization in the globalization stage must survive in a fiercely competitive market. The essential components for displaying business objectives in the actual world are representatives. Thus, in the modern world, every association makes an effort to manage its human resources department in order to maintain the motivation of its representatives. They have been practicing some of the administration's conjectures in that particular situation. By evaluating the level of inspiration exhibited by representatives, business work or their presentation in the marketplace can be evaluated. To achieve expert achievement in each budgetary year with less effort, inspiration can take the lead role. When attempting to determine what motivates representatives, representative inspiration research papers reveal that modern laborers are motivated by things that are inherently linked to the traits and goals of the individual. It seems that there was a dramatic shift in the characteristics and requirements of the average worker beginning in the 1970s. Representatives' needs from their managers changed as well, as people became more educated and the economy witnessed a rapid decline in the Protestant work ethic.

**Keywords—** *Motivation, Employee Motivation, Rewarding, Drives and Needs*

### INTRODUCTION

Employee retention is one of the most significant factors in the field of human asset the board. Capable and faithful employees are a base for effective organizations, and hence holding them is essential. Preparing new workers is tedious and requires more assets, in this way the more drawn out a representative remains with the organization, the better it is for the association.



# THE MANAGEMENT OF KNOWLEDGE AND INTELLECTUAL PROPERTY IN SUPPLIER- CUSTOMER RELATIONSHIPS

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## **Abstract:**

The aim of this research is to conduct an empirical investigation on the knowledge and intellectual property (IP) management practises of enterprises in the context of customer-supplier relationships. The material for the work was gathered through semi-structured interviews with management staff at 36 companies in Finland and the Netherlands. The work employs the qualitative technique of several case studies. Nearly all businesses maintained innovative relationships with their suppliers and customers, but the nature of these partnerships and the activities they included differed widely. The businesses therefore saw the management of information and intellectual property in these interactions as extremely difficult. We contend that businesses might manage the knowledge by differentiating between knowledge management in the exploitation phase of innovation output and knowledge management in the exploration phase of new business.

**Keywords:** Knowledge management; intellectual property; innovation; customer-supplier relationship.

## **Introduction**

In order to incorporate innovation design into the value chain, supplier participation was mostly used in the early stages of outsourcing. Most of the designs were produced domestically by individual enterprises, who strictly maintained strategic control over them (Chiaromonte, 2002). The 1990s saw the emergence of a new trend as a result of shifts in the competitive environment, such as the entry of new markets, globalisation, shorter technology life cycles, and dispersed value chains. Companies began searching for new methods to work with outside parties in addition to extending their new innovation and business development



## **SUSTAINABLE BUSINESS PRACTICES**

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### **ABSTRACT**

Sustainability in business refers to conducting business without negatively influencing the environment, community, or society as a whole. A sustainable company plan seeks to positively impact at least one of these categories. When businesses fail to accept responsibility, the opposite might occur, resulting in concerns such as environmental damage, inequality, and social injustice. When making business decisions, sustainable enterprises take into account a wide range of environmental, economic, and social concerns. These firms keep a close eye on the impact of their operations to ensure that short-term gains do not become long-term liabilities. This chapter discusses a company's social duty to its stakeholders as well as the role of business in environmental conservation.

***Keywords: Sustainability, social responsibility, environment protection***

### **INTRODUCTION**

According to the University of North Florida's Center for Sustainable Business Practices, sustainable business practices allow organizations to lessen their negative environmental impacts while still making a profit. Internal and external sustainable business practices are both possible.

Internal measures could include launching an in-office recycling program, lowering energy consumption in an office or factory, transitioning to natural gas or electric fleet vehicles, or mandating such purchases. External sustainability activities could include altering product materials to those that are less harmful to the environment, based on how they are mined, manufactured, fished, cultivated, and the energy required to produce them. Sustainable organizations are ones that address environmental sustainability and green manufacturing



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## Theosophy: Intrinsic Essence of Life and Wisdom of Divine

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As long as there is a lack of the inner discipline that brings calmness of mind, no matter what external facilities or conditions you have, they will never give you the feeling of joy and happiness that you are seeking. On the other hand, if you possess this inner quality of calmness of mind, a degree of stability within, then even if you lack various external facilities that you would normally consider necessary for happiness, it is still possible to live a happy and joyful life."<sup>1</sup>

Theosophy claims the wisdom of knowing the divine, which is the base of all religions like Hinduism, Buddhism and Christianity. The purity of mind and body lies in comprehending the majesty of highness and unfolding the spiritual subconsciousness. Life becomes fruitful when there is a synthesis of all the essential virtues. A person excels in understanding the law of nature by balancing his physical body, emotional mind, spiritual quest and rational truth. Theosophy persistently provides a lucid explanation on humanitarianism, spirituality, emotions, morality, karma and the selflessness of Mother Nature. Though the world may change every day, these virtues ascertain one's willpower to higher realms.

### Theosophy and Humanitarianism

Humanitarianism, the essential virtue symbolizes the sharing of love, compassion, benevolence and altruism, which makes the Earth a better place to survive. The principle of theosophy emphasizes solidarity among human beings, promoting universal brotherhood. This fraternal emotion is formed in the mental plane of a person. Usually, the concrete thought patterns of an individual can be formulated by optimistic ideals, magnanimous efforts and self-reflection. The world we live in teaches many beliefs, constructs various attitudes and moulds the thought patterns from time to time. Of all the qualities of the contemporary age, being humane is the rarest and the most needed aspect to be content and happy.

Annie Besant, the remarkable philanthropist quotes, "Every person, every race, every nation, has its particular keynote which it brings to the general chord of life and of humanity. Life is not monotone but a many-stringed harmony, and to this harmony is contributed a distinctive note by each individual."<sup>2</sup> A life where the self is much appreciated does not yield a harmonious society. Humanitarianism is a unified concept, where its essence is like a sponge absorbing water. The more the water is, the more the absorption is. One need not be a rich person to be a humanitarian. It is not only the money or food which brings happiness but the mind to be genuine and kind. Similarly, trifling actions of everyday life sow the seeds of benevolence from the infants to the septuagenarians. Hence, in the long road of life, each has a responsibility to understand one's stone to design the path of life.



## Theme of Illusion and Reality in the Glass Menagerie

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### Abstract

Tennessee Williams' timeless play, *The Glass Menagerie*, intricately weaves the theme of illusion and reality, creating a poignant exploration of the human condition. Set against the backdrop of the 1930s, the play unfolds in the Wingfield family's small apartment, where each character grapples with their own illusions as a means of coping with the harsh realities of life. The central character, Amanda Wingfield, seeks solace in the illusion of her Southern belle past, often retreating into a world of genteel charm and courtship. Her son, Tom, uses the illusion of the movies to escape the mundanity of his existence, blurring the lines between fiction and reality. Laura, Amanda's fragile daughter, finds refuge in her glass menagerie, a delicate collection that mirrors her own vulnerability and desire for a world untouched by harsh truths. As the play unfolds, the delicate balance between illusion and reality becomes increasingly precarious. The fragility of Laura's glass figurines serves as a metaphor for the delicate nature of the illusions that each character clings to. The arrival of Jim, a gentleman caller, disrupts the family's carefully constructed illusions, forcing them to confront the harsh realities they have been avoiding. Through poignant symbolism, evocative language, and deeply nuanced characters, Williams masterfully explores the consequences of relying on illusions as a means of navigating a challenging and unforgiving world. "The Glass Menagerie" stands as a timeless examination of the human tendency to construct and embrace illusions, ultimately questioning the price one pays when the boundary between illusion and reality begins to blur.



## **Bharati Mukherjee's *Desirable Daughters*: A Search for Identity**

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### **Abstract**

Bharati Mukherjee, a prominent Indian-American author, explores the intricate dynamics of identity, tradition, and self-discovery in her novel *Desirable Daughters*. Through the lens of Tara Lata, the protagonist, Mukherjee delves into the challenges faced by Indian immigrants in the United States. Tara's journey unfolds from a childhood engagement to a free to her immigration to the U.S., where she breaks away from traditional Indian norms, divorces her father-chosen husband, and raises her son alone. Mukherjee skillfully weaves a narrative that exposes the clash between Indian tradition and Western feminism. Tara's encounter with her sister's illegitimate son disrupts her perceptions of the past, prompting a re-evaluation of familial norms and cultural expectations. The novel poignantly portrays the struggles of diasporic women navigating the tensions between their Indian heritage and the demands of modern American life. *Desirable Daughters* encapsulates Mukherjee's exploration of shifting identities, cultural divides, and the impact of immigration on individual psyches. Tara's journey serves as a microcosm of the broader diasporic experience, highlighting the complex interplay between tradition and modernity in the lives of Indian immigrants in the United States.

**Keywords:** Indian diaspora, Cultural identity, Immigrant experience Intersectionality

One of the exceptional woman writers who has elevated Indian English literature is Bharati Mukherjee, an expatriate Indian living in the United States. She has gained international fame for her writings. Mukherjee has revealed her own self via the characters of her writings. Like many other post-modern writers, Bharati Mukherjee has exposed the problems faced by Indian immigrants living in the US or other Western countries. Having grown up in one



## A Thematic Study of Arundhati Roy's *The God of Small Things*.

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### ABSTRACT

The novel is notable for its intricate narrative technique, especially its elaborate narrative structure and the way in which Roy deals with perspective. There are two dominant narratives in the novel, as well as numerous subordinate narratives, which Roy manipulates so that at the moment of the two social transgressions of appropriate sexual conduct, these two dominant narratives are being covered. The novel explicitly mentions the tragic consequences of Ammu's inter caste marriage affair with Velutha, but leaves the future fate of Estha's incest with Rahel ambiguous. Many critics dispute whether the novel is pessimistic or hopeful about how society's response to such social transgressions will be, and often this is done specifically in the context of twins' incest.

In the light of these interpretations, modern theory shows how, when read as a story, the novel might be better understood as not just a pessimistic or an optimistic commentary, but rather a warning that, while societal influences can continue and create the illusion of inevitability, the future isn't set in stone. For example, the narrative style reproduces the nature that readers would like to experience second-hand. But most importantly, it presents readers in a way that invites a reaction from readers. This paper discusses the various themes dealt in this novel.

**Key Words:** Big and Small man, love, sexuality

Arundhati Roy's novel *The God of Small Things* is a mingie of several themes, the action starts with the return of a brother and a sister twin (Estha and Rahel) who had separated their seventh year and how they have come back to Ayemenem, after twenty-four years.

Ayemenem, is a remote village of Kerala, the once sweet and happy home of the very





## Dreams Deferred: Race, Class, and Gender in *A Raisin in the Sun*

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### ABSTRACT

*A Raisin in the Sun* is a play by Lorraine Hansberry that depicts the struggles and aspirations of a Black family in Chicago in the 1950s. The play focuses on how the family members deal with the arrival of a \$10,000 insurance check after the death of the father, and how they pursue their different dreams of a better life. The play explores the themes of racism, class, gender, family, and identity, as well as the conflicts between assimilation and cultural pride. The play also reflects the historical and social context of the civil rights movement, the Cold War, and the African independence movements. The play is considered a landmark in American drama, as it was one of the first plays to portray the realistic experiences and emotions of Black people on stage. The play has been adapted into a film, a musical, and a television movie, and has inspired many other works of art and literature. The play is based on the author's own experiences as a Black woman living in a segregated neighborhood. The play's title comes from a poem by Langston Hughes, which asks, "What happens to a dream deferred? / Does it dry up / like a raisin in the sun?"

The play is based on the author's own observations and experiences as a Black woman living in a segregated neighborhood. The play's title comes from a poem by Langston Hughes, which asks, "What happens to a dream deferred? / Does it dry up / like a raisin in the sun?" The play shows how the Youngers' dreams are deferred by the racism and oppression they face, but also how they resist and persist in pursuing their goals. The play is a powerful and moving portrayal of the Black family and the Black community, as well as a critique of the American dream and the

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# A HYBRID NANOCOMPOSITE OF MWCNT /CO<sub>3</sub>O<sub>4</sub> FOR HIGH-PERFORMANCE ELECTROCHEMICAL SUPERCAPACITORS

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## ABSTRACT:

In this present article, Co<sub>3</sub>O<sub>4</sub>/MWCNTs nanoparticles were prepared by microwave technique. The prepared sample is characterized by XRD, SEM, FT-Raman analysis, and TEM techniques. The elemental composition was analysed by using EDS techniques and electrochemical nature by CV analysis. The XRD studies revealed the crystalline nature, phase purity, average crystalline size. The functional group confirmed through FT-Raman spectra analysis. The surface morphology and average particle size of the nanoparticles studied by TEM analysis.

Keywords: Co<sub>3</sub>O<sub>4</sub>/MWCNTs nanoparticles, crystalline nature and microwave technique

## 1. Introduction:

Transition metal oxides with particular structures have generated a lot of interest because of their usual compositions and physicochemical characteristics. Several transition metal oxides have found extensive application in electrochemical areas, such as SnO<sub>2</sub>, MnO<sub>2</sub>, and ZnO. Among various transition metal oxides, cobalt oxide (Co<sub>3</sub>O<sub>4</sub>), a type of significant transition-metal oxide semiconductors with direct optical band gaps at 2.19 eV, Co<sub>3</sub>O<sub>4</sub>-based nanomaterials have been used extensively in sensors, supercapacitors, catalysts, and lithium batteries in recent years. Graphene, activated carbon, and single-walled carbon nanotubes lack the unique hollow, entwined network structure that multi-walled



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### **வாலிவதை படலத்தில் வாலியின் ஆளுமை**

**முன்னுரை:-**

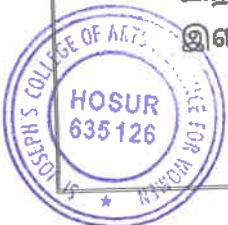
குறிக்கோளையும் கொள்கையையும் கொண்ட வாழ்க்கையை விளங்குவது இலக்கியம் என்று கொள்ளலாம். அதன் ஒருவகைக்காப்பியம். காப்பியம் என்பது நால்வகை உறுதிப்பொருளையும் கூறுவதாய் கதைப்பற்றி வரும் தொடர்நிலைச் செய்யுட்களே ஆகும். இவ்வகையில் கம்பராமாயணம் காப்பியக் கூறுகள் அனைத்தும் அமையப்பெற்றது ஆகும். வான்மீகி வடமொழியில் எழுதிய ராமாயணத்தைத் தழுவி எழுதப்பட்ட நூல் கம்பராமாயணம் ஆகும். திழுவலாயினும் பல இடங்களில்கம்பன் தமிழ்ப்பண்பாட்டிற்கேற்பவும் பாத்திரங்களின் உயர்வு நோக்கியும் தகுந்த இடங்களில் தகுந்த மாற்றங்களைச் செய்திருக்கின்றார். தகுந்த தமிழ்ச்சொற்களாலேயே பாடல் இயற்றி உலக மக்கள் யாவரும் பாராட்டுமாறு காப்பியத்தை இயற்றியுள்ளமைக் குறிப்பிடத்தக்கதாகும்.

**ஆளுமைத்திறன்:**

குறிக்கோளை அடைவதற்காக மனத்துள் கொண்ட எண்ணங்களுக்கு உரிய வகையில் அமையும் செயல்பாடுகளே ஆளுமைத்திறன் ஆகும். சிறந்த ஒழுக்கம், பிறரைத் துன்புறுத்தாமை, தக்கமுறையில் காரியமாற்றும் தன்மை, போர்ச்சிறப்பு, வெற்றிச்சிறப்பு, பாசத்தின் வெளிப்பாடு, தர்மவழியில் நடத்தல் கல்வி கேள்விகளில் சிறந்து பெற்றவர். விளங்குதல் போன்றவைகளே ஆளுமைத் திறன்களாகும். இவை கம்பராமாயணத்தில் இடம்பெற்றுள்ள வாலியின் பாத்திரப்படைப்பில் அமைந்துள்ள திறம் பற்றி ஆராய்வதே இக்கட்டுரையின் நோக்கமாகும்

**வாலியின் வரலாறு**

வாலி என்பதற்கு வாலில் வலிமையுள்ளவனென்றும் வாலினின்று பிறந்தவனென்றும் பொருள். வாலிராஜாவாகவும், சுக்கிரீவன் இளவரசனாகவும் ஆட்சி செய்து கொண்டிருந்தனர். ஒரு காலத்தில் மாயாவி



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### வைணவ இலக்கியத்தில் ஆண்டாள்

**முன்னுரை:**

மனித வாழ்க்கையில் முக்கிய இடம் பெறுவது சமயங்கள் இதில் வைணவ சமயக் கடவுளான திருமால் மேல் பக்தி கொண்டு கி பி 6 ஆம் நூற்றாண்டிலிருந்து 9 ஆம் நூற்றாண்டுவரை பன்னிரு ஆழ்வார்களால் பாடப்பட்ட அருட்பாசுரங்களை எல்லாம் நாதமுனிகள் என்னும்ஆசாரியர் பத்தாம் நூற்றாண்டில் தொகுத்தார்.இந்த ஆழ்வார்களுள் ஒரே ஒரு பெண் ஆழ்வார் இருந்தார். அவர் தான் ஆண்டாள். வைணவ இலக்கியத்தில் இடம்பெறும் இந்த ஆண்டாள் குறித்தும் அவரது பக்திச் சிறப்புக் குறித்தும் இங்குக் காணலாம்.

திருமாலைப் பரம்பொருளாக ஏற்று வழிபடும் வைணவப் பெரியோர்களை ஆழ்வார்கள் என்றும் ஆசாரியார்கள் என்றும் இருவகைப் படுத்துவர். ஞானம் செழிக்கும் தங்களுடைய இடமான வைகுந்தத்தை விட்டு ,இந்த இருள் தரும் மா ஞாலத்தில் அவதரித்து, உலகம் உய்யும் கைங்கரியத்தில் ஆழங்கால் பட்டமை கொண்டும், மண்ணுலகில் அவதரித்து , உண்டியே , உடையே அகத்தோடும் இம்மண்ணுலகத்தாரோடும் கூடுவதன்றி பகவானுடைய பக்தியிலே ஆழ்ந்திருந்தமையாலும் ஆழ்வார் எனப்பட்டனர் .(1) என்ற கருத்து இங்கு உற்றுநோக்கத்தக்கது.

**பன்னிரு ஆழ்வார்கள்**



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### **தமிழகத்திலிருந்த சமயங்கள்**

#### **முன்னுரை**

மனிதன் பகுத்தறியும் அறிவாற்றலால் , தன்னை காத்தும், சமுதாயத்தை காத்தும் மற்ற உயிரினங்களை காக்கும் தன்மை பெற்றுள்ளான். வாழ்வில் இன்பம் துன்பம் ஏற்பட்டு, மனம் மாறுபடும் போது, நிலையான மனதைப் பெற விளைந்தான். அப்போது அவனது மனதிற்கு ஏற்பட்ட, சிந்தனையே இறைநெறியாகும். இதனை 'சமயம்' என்று கூறுகிறார்கள்.தமிழகத்தில் சமயம் தொடர்பான செய்திகள், சங்ககாலத்திற்கு முன்பே இருந்தன; என்று முனைவர் சி.பாலசுப்பிரமணியம் தன்னுடைய நூலில் பதிவு செய்துள்ளார்.

#### **விளக்கம்: (சமயம்)**

"சமைத்தல்" என்ற சொல்லிலிருந்து தோன்றியது. சமைத்தல் என்பது பல்வேறுவித உணவுப் பொருட்களை, சுவைப் பெற பக்குவப்படுத்துவதாகும் .அதேபோல உலக வாழ்வில் பல்வேறு மனநிலையில் , வாழும் மனிதனை ஒரு நிலையான மனதை பெற , அமைக்கப்பட்டது என்று பொருள் கொண்டு 'இறையருளை ' பெற பகுக்கப்பட்ட நெறி என்றும் முனைவர் சி. நயினார் முகமது கூறுகிறார்.

#### **தமிழகத்தில் கால் பதித்த சமயங்கள் :**

சைவம், வைணவம் என இருவகையான சமயங்கள் தமிழகத்தில் காலூன்றி இருந்தனர். சிவபெருமானை , முழுமுதற் கடவுளாக கொண்டது சைவ சமயமாகும். திருமாலை முழுமுதற் கடவுளாக கொண்டது வைணவ சமயமாகும். இச்சமயங்கள் சிந்துவெளி நாகரிகாலத்திலிருந்து கிபி மூன்றாம் நூற்றாண்டு வரை, வட இந்தியாவிலும், டெக்கானிலும் எவ்வாறு இருந்தது என்பதைடாக்டர் . பந்தர்க்கர் என்ற அறிஞர் கூறுகிறார் என்பதை , டாக்டர் .ராசமாணிக்கனார் பதிவு செய்கிறார்.

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### வாழ்வில் நிலையாமையிலிருந்து நிலைபெறுதல்

#### முன்னுரை

உலகத்தில் நிலையில்லாத மனிதனாய் பிறந்த ஒவ்வொருவரும் நல்ல அறச்செயல்களைச் செய்ய வேண்டும் என்பதே நிலையாமையின் தத்துவமாகும். நிலையாமையின் தத்துவத்தை ஒருவன் புரிந்துக் கொள்வதில் தான் வாழ்க்கையின் அடிப்படைத் தன்மை அடங்கியிருக்கிறது. இவ்வுலகில் இருக்கின்ற பொருட்கள் அனைத்தும் ஒரு நாள் அழியக் கூடியதே அதுவே இயற்கையின் நியதி. ஆகவே மனிதர்கள் நிலையானது என்று நினைக்கும் இவ்வுலகில் இளமை, யாக்கை, பொருள் இவை மூன்றும் எவ்வகையில் நிலையற்றது என்பதை இக்கட்டுரையின் வழி காண்போம்.

#### மெய் நிலையற்றது

உலகில் பிறந்த எல்லோரும் ஒரு நாள் கண்டிப்பாக சாகத்தான் வேண்டும், "ஆறிலுஞ் சாவு நூறிலும் சாவு" என்பது போல் ஒருவனுடைய ஆயுட்காலம் இவ்வளவு நாட்கள் என்று யாராலும் உறுதியாக சொல்லிவிட முடியாது என்பதை,

"வாழ்நாள் வகையளவு அறிஞரும் இல்லை"<sup>1</sup> (நற்றிணை 314) என்று சங்க இலக்கியமான நற்றிணையின் பாடல்வரி மூலம் அறியலாம். எலும்புகளும், தசைகளும், உதிரமும் ஆகியவையே யாக்கையாகும். அதன்பால் அன்பு வைத்து அறம் மறந்து கிடக்கிறார்கள் மக்கள். இதையே திருக்குறளானது

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## சங்க நூல்களில் கொங்கு வழிப்பாட்டு முறைகள்

### முன்னுரை

மக்கள் தெய்வங்களை நம்பிகையுடனும் பக்தி உணர்வுடனும் வழிபடுதல் வழிபாடு ஆகும்.தெய்வங்கள் மக்களோடு ஒன்றியச் சக்தியாக விளங்குகின்றன. 'வழிபடுதல் என்ற சொல் வழி, படுதல் என பொருள்படும். அதாவது கடவுள் நெறி நிற்பதல் என்பதாகும்.கடவுள் வழிப்பாட்டில் எண்ணுதல் சிந்தித்தல் என்பது முதன்மையானது கடவுளைசிந்தித்தல் இன்றியமையாதது. இதையே வேறுவகையில் கூறினால். சங்க இலக்கியத்தில் கொங்கு நாட்டுப்பாடல்களில் வழிபாட்டு முறைகளை இக்கட்டுரையில் காண்போம்

### கடவுள்

'கடவுளை எண்ணுதல் அவசியம் எண்ணங்கள் வலியது. உயிர்களின் ஆக்கம் கடவுள் கொள்கைக்கோட்டுபாடாகும்' என்று கங்காதரன் இராசாமணி குறிப்பிடுகின்றார்.'கொங்கு நாட்டில் சிவன், திருமால், முருகன். கொற்றவை முதலிய தெய்வ வழிபாடுகள் நடந்தன. முருகன் வழிபாடு மிகவும் சிறப்புப்பெற்றிருந்தது பெண்களுக்கு வேலன் வெறியடால் என்ற முருக வழிபாடு நிகழ்த்தியுள்ளனர். திருச்செங்கோடு மலை அக்காலத்தில் முருகன் கோயிலாக சிறப்புப்பெற்றிருந்தது.

### சிவன்

நின்கொற்றக்குடை முனிவரால் வணங்கப்படும் மூன்று கண்களையுடைய சிவப்பெருமானது கோயிலை வலம் வருவதற்கு தாழ்வதாகுக! நுன்முடி நான்கு மறைகளையுடை அந்தணர் நினை வாழ்க என்று வாழ்த்தக் கையை எடுக்கும் முன்பு வணங்கு

“முக்கட் செல்வர் நகர்வலஞ் செயற்கே”<sup>2</sup>

நற்றினை பாடல் குறிப்பிடுகிறது. அதியமானிடமிருந்து நெல்லிக்கனியைப்பெற்ற ஒளவையார் அதியமானை



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சங்க இலக்கியங்கள் காட்டும் சடங்குகளும் நம்பிக்கைகளும்

முன்னுரை

உலகில் தாம் வாழும் சூழ்நிலைகளுக்கேற்ப ஒவ்வொரு பகுதியில் வாழும் மக்களும் சில பழக்கவழக்கங்களையும், நம்பிக்கைகளையும் கொண்டுள்ளனர். ஒரே பகுதியில் வெவ்வேறு இனக்குழுக்களைச் சார்ந்த மக்கள் சேர்ந்து ஒற்றுமையாக வாழ்ந்து வருவதைக் காண்கிறோம். அவ்வாறு வெவ்வேறு சமுதாய மக்கள் சேர்ந்து நெடுங்காலம் வாழ்ந்து வரும்போது அப்பகுதி மக்களின் நம்பிக்கைகளிலும் சடங்குகளிலும் சில பொதுமைக் கூறுகள் ஏற்படுவதுண்டு. இருப்பினும் சமுதாயம் சார்ந்த சில நம்பிக்கைகளை அவர்கள் தனித்தன்மையோடு பின்பற்றி வருவதையும் அறிய முடிகிறது. சமூகத்தோடு பின்னிப் பிணைந்துள்ள மக்களின் நம்பிக்கைகளும் அதைச்சார்ந்த சடங்குகள் பலவும் ஏதேனும் ஒரு வடிவத்தில் மக்களால் இன்றும் கடைப்பிடிக்கப்படுகின்றன. இச்சடங்குகள் குறித்து, “வாழ்வின் தகுதிப் பெயர்வினை அடையாளப்படுத்தும் வகையில் நிகழ்த்தப்படும் முறையான செயல் முறைகளே சடங்குகள். முன்னோரிடமிருந்து பெற்ற ஒவ்வொரு சடங்கும் அடுத்தடுத்த தலைமுறைக்காக மாற்றியளிக்கப்படுகின்றது.இவை குறித்து இங்குக் காண்போம்.

வாழ்க்கை என்ற வினைச்சொல்

இம்மண்ணில் பிறக்கும் குழந்தைக்கு முன்னோர் மேற்கொண்ட பழக்கங்களைப் பெற்றோர் செய்வதும் பின்னர் அக்குழந்தை வளர்ந்து தான் புரிந்து கொண்டவற்றைத் தன் சந்ததிகளுக்குக் கற்றுக் கொடுப்பதும் மாறாத செய்முறையாகவே தொடர்கின்றது. குழந்தை பிறந்தது தொடங்கி ஒவ்வொரு பருவ மாற்றத்தின் அடையாளமாக அதன் உடல் வளர்ச்சிக்கும், மன வளர்ச்சிக்கும் தொடர்புடைய சடங்குகள் மேற்கொள்ளப்படுகின்றன. பிறப்பு, பூப்பு, திருமணம், இறப்பு என ஓர் உலகம் நேர்க்கோட்டில் சென்று ஒட்டுமொத்தமாக அழிந்து விடுவதில்லை. மாறாகப் பிறப்பு, பூப்பு, திருமணம், இறப்பு, மீண்டும் பிறப்பு... எனச் ‘சுழலேணி’ முறையில் வட்டமிட்டு உயர்ந்து செல்லும் இயங்கியலைக் கொண்டிருக்கிறது. வாழ்க்கை வட்டச் சடங்குகள் அனைத்தும் தம் குலங்கள் தழைத்து வாழவேண்டும் என்ற மனித வளத்தை முதன்மைப்படுத்தியே செய்யப்படுகின்றன. அதனால்தான் மனிதனின் பிறப்பையும், வாழ்தலையும் மையமாகக் கொண்டு வாழ்க்கை





### About Conference

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இராமலிங்க அடிகளாரின் தனிமனித ஆளுமை

**முன்னுரை**

தனிமனிதனின் நடத்தையில் காணப்படும் நிலைத்து ஒருமைப்பாடுதான் அவன் ஆளுமைக் கூறுகளாகப் பரிணாமக் பெறுகின்றன. அவ்வகையில் 19 ஆம் நூற்றாண்டில் தமிழ்நாட்டில் வாழ்ந்த சிதம்பரம் ஈராமலிங்கம் என்னும் திருவருட்பிரகாச வள்ளலார் தனிமனித ஆளுமை வளர்ச்சிக்கும் அதன்வழி தனிமனித உள்ளடங்கிய சமுதாய வளர்ச்சிக்கும் ஆற்றிய பணிகள் குறித்து ஆராய்வதே இக் கட்டுரையில் நோக்கமாகும்.

**பிறப்பு**

கடலூர் மாவட்டம், சிதம்பரம் வட்டத்திலுள்ள மருதூரில் 05-10-1823 இல் இராமலிங்கர் பிறந்தார். தந்தையார் இராமையாபிள்ளை தாயார் சின்னம்மையார். இவர்களுக்குச் சபாபதி, பரசுராமன் என்னும் இரு ஆண்மக்களும், சுந்தரம்பாள், உண்ணாமுலை என்னும் இரு பெண்மக்களும் பிறந்தனர். ஐந்தாவது குழந்தையாக இராமலிங்கர் பிறந்தார். இராமலிங்கர் ஆறுமாதக் குழந்தையாக இருந்தபோது தந்தை இறந்தார்; அதன்பின் சின்னம்மையார் செங்கல்பட்டு மாவட்டம் பொன்னேரிகருகிலுள்ள சின்னக்காவணம் கிராமத்திற்குப் பிள்ளைகளுடன் சென்று தங்கினார். அதன்பின்னர் தம் அண்ணன் சபாபதிபிள்ளை வட சென்னையில் ஏழுகிணறு பகுதியிலுள்ள வீராசாமிப்பிள்ளை தெருவில் 38 ஆம் எண்ணுள்ள வீட்டில் வசித்து வந்தார் அவருடன் தம் தம்பியும் தங்கியிருந்தார். இராமலிங்கர் 1825 முதல் 1857 வரை சென்னையில் வாழ்ந்துள்ளார். பத்தொன்பதாம் நூற்றாண்டில் வாழ்ந்த வள்ளலார் இறைவனால் உலகுக்கு அனுப்பப்பட்டவர் என்பதை அவரே கூறியுள்ளார்.

அகத்தே கறுத்துப் புறத்து வெளுத்திருந்த

உலகர் அனைவரையும்

சகத்தே திருத்திச் சன்மார்க்க சங்கத்

தடைவித்திட அவரும்

இகத்தே பரத்தைப் பெற்று மகிழ்ந்திடுதற்

கென்றே எனபெற் இந்த

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## தமிழ் நாடக இலக்கியம்

### முன்னுரை

கதை தழுவியக் கூத்தே நாடகம் என்றழைக்கப்படுகின்றது. இயல், இசை, நடனம், ஓவியம் ஒப்பனை எனப் பல்வேறு கலைகள் இயைந்ததே நாடகமாகும். நாடகம் கண்ணுக்கும், கருத்துக்கும் இன்பம் பயப்பது.இந்தியாவில் தோன்றிய முதல் நாடகம் பரதரின் நாட்டிய சாத்திரம் ஆகும்.

சங்க காலத் தமிழகத்தில், நடனக் கலை வல்லுநர்கள் கூத்தர், விறலியர் என்றும், நடிகர்கள் பொருநர்கள் என்றும் அழைக்கப்பட்டனர். தமிழகத்தில் நாடக கலை தொல்காப்பியத்திற்கு முற்பட்டே தொட்டு வளர்ந்து வந்துள்ளது. இத்தகு சிறப்பு வாய்ந்த நாடககலைக் குறித்து இக்கட்டுரையில் காண்போம்.

### தமிழ்நாடகத்தின் தொன்மை

தொல்காப்பியர் "நாடக வழக்கினும்" என்று நாடகத்தைக் குறிப்பிடுகிறார். சிலப்பதிகாரம் நாடகக்கூறுகளுடன் நாடகக் காப்பியமாகவே திகழ்கிறது. கூத்தாட் டவைக்குல்லாத் தற்றே என்ற குறள் வழி நாடக அரங்கம் இருந்த செய்தியினை அறியலாம். அகத்தியம், குணனால், கூத்தநூல், மதிவாணர் நாடகத் தமிழ் போன்ற நாடக நூல்கள் பழந்தமிழர் வழக்கில் இருந்தன என்பதனைச் சிலப்பதிகாரத்திற்கு உரை எழுதிய அடியார்க்கு நல்லார் அவர்கள் குறிப்பிட்டுச் செல்கிறார். குறவைக் கூத்து, துணங்கைக் கூத்து, ஆடிப்பாவை போன்ற கூத்துவகைகளை சங்ககாலத்தில் காணமுடிகிறது.

பதினோர் ஆடலும், பாட்டும், கொட்டும்,

விதிமாண் கொள்கையின் விளங்க அறிந்து - ஆங்கு

ஆடலும் பாடலும், பாணியும், தூக்கும்,

கூடிய நெறியின் கொளுத்தும் காலை-

பிண்டியும், பிணையலும், எழில் கையும், தொழில்கையும்,

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### சுற்றுச்சூழல் மேலாண்மை

#### முன்னுரை:

இறைவன் உலகத்தைக் படைத்து , "பழுகிப் பெருகி பூமியை நிரப்பி , அதை கீழ்ப்படுத்தி, சமுத்திரத்தின் மச்சங்களையும் ஆகாயத்து பறவைகளையும் ,

பூமியின் மேல் நடமாடுகிற சகல ஜீவ ஜந்துக்களையும் ஆண்டுகொள்ளுங்கள்" 1 என்று சொல்லி தேவன் ஆதாம் ஏவாள் என்ற இருவரையும் ஆசீர்வதித்தார் . ( ஆதியாகமம் 1 : 28 ) பக் 2 - 3

கடவுள் படைப்பில், ' பூமி ' என்பது மகத்துவமான ஒன்று. ஏனெனில் , உயிரினங்கள் வாழ்வதற்கு ஏற்ற இடமாக இப்பூஉலகை, நமக்கு கொடையாக கொடுத்துள்ளார் . எல்லா உயிரினங்களுக்கும் 'தாய் வீடாக ' இருப்பது பூமியே . உயிரிகள் உண்டு , உறங்கி, சுவாசித்து, உயிர் வாழக்கூடிய, பூமி இன்று மாசடைந்து உள்ளது. பல்வேறு சுற்றுச்சூழலில் சிக்கி தலை குனிந்து, சீர் கெட்டு காணப்படுகிறது. குறிப்பிட்டு சொல்ல வேண்டும் என்றால் , நாகரிகம் , பண்பாடு, கலாச்சாரம் இதையெல்லாம் , மனிதனிடம் என்று தோன்ற, ஆரம்பித்ததோ அன்றே, சுற்றுச்சூழல் மாசு அடைய ஆரம்பமானது . இதற்கு முழு முக்கிய காரணம் மனிதனே! பூமி வெப்பமயமாதல், கார்பன் அடிச்சுவர்கள், ஒசோன் ஓட்டைகள், நீர் நிலைகள் கழிவு பொருட்கள், இயற்கை பேரழிவுகள், என திரும்பி திசையெல்லாம் , பிரச்சனைகள் தலை விரித்து ஆடுகின்றன . இயற்கையை இறையென்று வாழ்ந்தார்கள் நம் முன்னோர்கள் .

" ஞாயிறு போற்றுவும் ; திங்கள் போற்றுவும்

மாமழை போற்றுவும்" 2

என்று, தமிழ் கோவலான 'இளங்கோ ' தனது சிலப்பதிகாரம் என்ற நூலில் , 'பசுமை' பற்றி கூறுகிறார்." காக்கை குஞ்சு எங்கள்

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**ஜெயகாந்தன் சிறுகதைகள் கூறும் சமுதாயச் சிந்தனைகள்**

**முன்னுரை**

சமூகத்தில் வாழ்கின்ற மக்களின் வாழ்க்கை முறை பொருளாதாரம், அரசியல், சமயம், சாதி, பாலினம் முதலிய பல்வேறு காரணங்களாக ஏற்றத்தாழ்வுகளைக் கொண்டதாகவே காணப்படுகிறது. இந்த ஏற்றத்தாழ்வுகளும் நிலையானவைகளாகத் தொடர்வதும் இல்லை. மேலே இருப்பவர்கள் கீழே வருவதும், கீழே இருப்பவர்கள் மேலே செல்வதுமாக அசைவுகளும் மனித வரலாற்றில் தொடர்ந்த வண்ணம் இருந்து வருகின்றன என்றாலும் இருபதாம் நூற்றாண்டில் உலகம் முழுவதும் பரவிய சுதந்திரம், சமத்துவம், சகோதரத்துவம், மார்க்சசியம் முதலிய மனிதநேயச் சிந்தனைகளின் வீச்சினால் சமூகத்தின் படிவரிசையில் கடைநிலைக்குத் தள்ளப்பட்ட பெருவாரி மக்களிடம் மிகப்பெரிய விழிப்புணர்ச்சி தோன்றி மலர்ந்தது. இருபதாம் நூற்றாண்டின் படைப்பாளிகள் பலரும் இந்தச் சிந்தனை வயப்பட்டவர்களாகவே இயங்கி உள்ளனர். இந்தவகையில் ஜெயகாந்தனின் படைப்புகள் குறிப்பாக, குறும்புதினங்கள் பெரும்பாலும் விளிம்பு நிலைமக்களைப் பற்றியதாக அமைந்துள்ளது.

ஜெயகாந்தன் எளியவாழ்க்கையைத் தொடங்கியவர். எளிய மக்களைப் பற்றி எழுதி எழுத்து வாழ்வைத் தொடங்கியவர். எளிய மக்களுக்கான அரசியலில் இருந்து தான் தனது அரசியல்வாழ்வையும் தொடங்கியவர். மைய அரசியலுக்குள் நகரநேர்ந்தாலும் அங்கேயும் எளிய மனிதராகவே தன்னைத் தக்கவைத்துக் கொள்ளத் தெரிந்தவர்.

**சமுதாயம்-பொருள்வரையறை**



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தொல்காப்பியத்தில் மகடுஉ

**முன்னுரை**

பழங்கால மக்களின் வாழ்க்கை முறை, பண்பாடு, நாகரிகம் ஆகியவற்றை அறிந்துகொள்ள மிகச்சிறந்த இலக்கண நூலாகத் திகழ்வது தொல்காப்பியம். இந்நூல் அகப்பொருள் பற்றி மட்டும் கூறாமல் புறப்பொருளையும் கூறியுள்ளது. மேலும் மொழிக்குரிய இலக்கணமும் வாழ்க்கைக்குரிய இலக்கணமும் இந்நூலில் இடம் பெற்றுள்ளது. தொல்காப்பியர் காலத்தில் மகடுஉ(மகளிர்) நிலை, மகடுஉ (மகளிர்) இயல்பு எவ்வாறு இருந்தன என்பதை இக்கட்டுரையில் ஆராய்வோம்.

மகளிரின் பிறப்பைப் பற்றி கவிமணி,

“மங்கையராகப் பிறப்பதற்கே-நல்ல

மாதவஞ் செய்திட வேண்டுமம்மா...”<sup>1</sup> என்று பாடியுள்ளார்.

**தலைமகளின் இயல்பு**

அச்சம், நாணம், மடன் இம்மூன்றும் மகளிரின் உடமைகள் ஆகும்.

“அச்சமும் நாணும் மடனும் முந்துறுத்தல்

நிச்சமும் பெண்பாற் குரிய என்ப”<sup>2</sup>

தொல்காப்பியர் தலைமகளுக்குரிய இலக்கணம் என்று கூறியுள்ளார். களவியலுரையில் “நாண் என்பது, பெண்டிர்க்கு இயல்பாக உள்ளதொரு தன்மை, மடம் என்பது, கொளுத்தக்கொண்டு கொண்டது விடாமை, அச்சம் என்பது பெண்மையில் தான் காணப்படாததோர் பொருள் கண்டவிடத்து அஞ்சுவது. பயிர்ப்பு என்பது பயிலாத பொருட்கண் அருவருத்து நிற்கும் நிலைமை.”<sup>3</sup>



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### சங்க இலக்கியத்தில் உணவே மருந்து

#### முன்னுரை

நோயில்லா நெறியை உணர்த்துவது உணவு நெறியாகும். உண்ணும் உணவில் குற்றமுடைய உணவு, நல்ல உணவிலும் உண்போர் உடலுக்கு ஒவ்வாத உணவு என்னும் வகை உணவை நீக்கி விட்டு, உடலுக்கும் மனத்துக்கும் ஏற்ற உணவை உட்கொண்டால் உடலுக்கு மட்டுமல்ல உயிருக்கும் குற்றம் உண்டாகாது என்பர். சங்க இலக்கியத்தில் உணவே மருந்து ஆராய்வதாக இக்கட்டுரை அமைகின்றது.

#### உணவே உயிர்

உணவே உயிர் வாழ்வதற்குத் தேவையாகவும், உணவே உடல் நோய்க்கு மருந்தாகவும், அவ்வுணவே பல சமயங்களில் உடல் நோயைக் கொடுக்கும் மருந்தாகவும் அமைவதுண்டு.

“நீரின்றமையா யாக்கைக் கெல்லாம்

உண்டி கொடுத்தோர் உயிர் கொடுத்தோரே

உண்டிமுதற்றே உணவின் பிண்டம்

உண வெனப் படுவது நிலத்தொடு நீரே

நீரும் நிலனும் புணரியோ ரீண்டு

உடம்பும் உயிரும் படைத்தி சினோரே.”

எனும் புறப்பாடல் பழந்தமிழர்களின் உணவு சார் மருத்துவ அறிவைப் படம் பிடித்துக்காட்டுகிறது.

உயிர் வாழவேண்டுமானால் உணவு உண்ண வேண்டும். உணவு இல்லாமல் உயிர் வாழ்தல் என்பது இயலாது என்பதை உணர்ந்து;

“உண்டி கொடுத்தோர், உயிர் கொடுத்தோரே

உண்டிமுதற்றே உணவின் பிண்டம். (புறம்-18: 19-20)



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## About Conference

Virtual International Award Conference on Multi- Disciplinary Research and Innovation is a global event organised by Dolphin (PG) College of Science & Agriculture, Chunni Kalan, Punjab, India in association with International Association of Research and Developed Organization (IARDO) & Conference World conducted through Google meet. This conference provides an international forum for researchers, developers, engineers and practitioners who are involved in real time projects that provide solutions to exchange their valuable ideas and showcase the ongoing works which may lead to path breaking foundation of the futuristic engineering. It accentuates indispensability of interdisciplinary and cross - linked thinking with respect of innovation and market opportunities. All the accepted paper will be published in International Journal with ISSN Approved by UGC . Selected papers will be published in Scopus Index Journals.



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Editor's  
DR. ARVIND PANDIT KHARAT  
DR. PARDEEP GOEL



# **Virtual International Award Conference on Multi- Disciplinary Research and Innovation**

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## Exploring the Phytochemical Activities of Cloves: Antioxidant and Antimicrobial Properties for Enhanced Food Preservation and Safety

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### Abstract:

This review delves into the diverse array of bioactive compounds present in cloves, a commonly utilized spice, with a particular focus on flavonoids, hydroxybenzoic acids, and hydroxycinnamic acids. The major phenolic constituents, namely eugenol, eugenyl acetate, and caryophyllene, contribute significantly to cloves' high antioxidant activity. The antioxidative potential of cloves plays a crucial role in protecting the human body against free radicals and mitigating the risk of chronic diseases. Furthermore, the ability of cloves to inhibit lipid peroxidation makes them valuable in extending the shelf life of food products, particularly during processing and storage.

**Key Words:** Clove oil, Pain Relief, Aroma Therapy, Food production system

### Introduction:

Cloves are the dried flower buds of the Myrtaceae family tree, which includes clove trees. The clove tree can grow up to 20 meters tall and has a vegetative cycle that lasts for over a century. It features smooth, oval leaves with multiple terminal clusters at the tips of the branches, along with reddish flowers. The clove fruit has an intense aroma and an elongated shape (Cortés-Rojas et al., 2014). Four years after planting, clove buds start to flower (Batiha et al., 2020). Cloves are traditionally harvested by hand or by applying a natural phytohormone to induce bud fall during the pre-flowering stage (Cortés-Rojas et al., 2014; Baietto, 2014). Clove trees are native to the Indonesian Maluku Islands, but they are widely formed in India, Indonesia, Malaysia, Sri Lanka, Madagascar.

Clove oil, derived from clove buds, has various applications due to its unique properties.

Here are some common uses:

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## Quorum Sensing and Quorum Quenching of Bacteria in Competitive Microbial Ecosystems

**Ramya.K**

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### Abstract:

Bacteria produce enzymes that can degrade the signalling molecules involved in quorum sensing. One well-known example is the enzyme acylase, which can break down acyl homoserine lactones (AHLs), a common type of signalling molecule used by Gram-negative bacteria for quorum sensing. The concentration of AHLs in the environment decreases because of climatic condition as the temperature and weather changes leads to the decrease the signal molecules for quorum sensing. This interference disrupts the communication between bacteria, preventing them from coordinating the expression of virulence factors. With quorum sensing disrupted, the pathogenic bacteria may exhibit reduced virulence, as they are unable to coordinate the expression of factors that contribute to their harmful effects on the host.

**Keywords:** Quorum Sensing, Quorum sensing, Virulence, Acylase.

### Introduction:

Quorum sensing is a cell cell used by various bacteria to correlate gene expression in relation to population density. It allows bacteria to sense and respond to changes in their environment by detecting the density of signalling molecules, often known as autoinducers, that are released by neighbouring bacteria. Quorum sensing is a crucial aspect of microbial flora, influencing various behaviours such as biofilm formation, virulence factor production, and other cooperative activities.

Quorum sensing works in connection with microbial flora by producing the signal molecules where Bacteria release signalling molecules (autoinducers) into their surrounding environment and the production of these molecules increases with the bacterial population density. As the bacterial population grows, the concentration of signalling molecules in the environment increases. Once a threshold concentration is reached, bacteria can detect the presence of these molecules. Bacteria have receptor proteins that can bind to the signalling molecules. When the molecules bind to these receptors, it triggers a series of intracellular signalling events. The binding of signalling molecules to receptors influences the expression of specific genes. This coordinated gene expression leads to various physiological responses, such as the production of virulence factors, biofilm formation, or the activation of other cooperative behaviours.

Quorum sensing plays a role in shaping the dynamics and interactions within the microbial community. Quorum sensing is often associated with the formation of biofilms, which are structured communities of microorganisms attached to surfaces. Biofilms can be found in various environments, including the human body, where they play both beneficial and harmful roles. In pathogenic bacteria within the microbial flora, quorum sensing can regulate the production of virulence factors. These factors contribute to the bacteria's ability to cause disease. It allows bacteria to sense the presence of





## An inclusive review of *Eichhornia crassipes* in Phytoremediation

**P. Jancy Magdalene**

Assistant Professor, Department of Biotechnology,  
St. Joseph's College of Arts and Science for Women, Hosur

### Abstract

*Eichhornia crassipes*, commonly known as water hyacinth, has garnered attention for its potential role in phytoremediation—an environmentally friendly and sustainable approach to mitigate water pollution. This review provides a comprehensive overview of the utilization of *E. crassipes* in phytoremediation, highlighting its unique physiological and biochemical attributes that contribute to its efficacy in remediating various pollutants. The review begins by elucidating the remarkable adaptability of *E. crassipes* to diverse aquatic environments, making it a versatile candidate for addressing contamination issues. A focus on the plant's anatomy and physiology reveals its proficiency in nutrient uptake, biomass accumulation, and pollutant absorption, showcasing its potential for remediating heavy metals, nutrients, and organic contaminants. By providing a comprehensive synthesis of the existing knowledge, this work aims to guide future research and application strategies, fostering the integration of *E. crassipes* into holistic approaches for water quality improvement.

**Keywords:** *Eichhornia crassipes*, Bioremediation, Phytoremediation

### Introduction:

In India, agricultural and industrial activity have both contributed to water contamination. Surface and groundwater supplies get contaminated when industrial effluents that have been improperly or completely cleaned are dumped into bodies of water. About 70% of the sewage produced in India is left untreated. Untreated or only partially treated effluent from residential and commercial sources frequently finds its way into rivers and lakes in metropolitan areas. This has led to eutrophication, a natural or anthropogenic process characterized by an excessive accumulation of nutrients, primarily nitrogen and phosphorus, in aquatic ecosystems.

*Eichhornia crassipes*, commonly known as water hyacinth, is a free-floating aquatic plant that has gained both notoriety and recognition for its diverse range of applications. Native to South America, water hyacinth has become a globally distributed plant, often thriving in freshwater ecosystems. While its rapid proliferation has raised ecological concerns, its unique







## ANALYSIS OF DYES (4-METHYLPHTHALONITRILE)

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### ABSTRACT:

The geometries, electronic structures, polarizabilities, and hyperpolarizabilities of dye 4-Methylphthalonitrile was studied using ab initio HF and density functional theory with hybrid functional B3LYP, and the UV-Vis spectra were investigated by using TDDEF methods. The NBO results suggest that 4-Methylphthalonitrile is a (D-p-A) system. The calculated isotropic polarizability of 4-Methylphthalonitrile is 115.138 a.u. The calculated polarizability anisotropy invariant of 4-Methylphthalonitrile is 88.526 a.u.

**Keywords:** 4-methylphthalonitrile, TDDEF, isotropic polarizability, Electromagnetic Radiation, 4-Methylphthalonitrile.


### I INTRODUCTION:

The demand for energy has dramatically increased since the start of the industrial revolution in which the transformation of heat into motion began to be applied. This increase is the result not only of industrial development but also of population growth. Nowadays, the majority of the energy sources are non-renewable, such as fossil fuels-coal, oil and natural gas, which provide over 80% of our energy-plus uranium. These sources are contaminating dangerous, or produce a strong impact on the environment-especially the climate; hence, the world is in search of alternative renewable sources of energy. This includes solar, wind and wave energy, biomass (wood or crops such as sugarcane), geothermal energy, and hydro power. These alternative sources are fast developing in some countries, e.g. eolic energy constitutes 6% of primary energy in the European Union, but less than 1% world-wide. Big expectations are related to international nuclear fusion research (ITER), which is considered energy source of the future.

### II EXPERIMENTAL VALUE.

Introduction of Molecules with Electromagnetic Radiation Using the Born-Oppenheimer approximation, the energy of a molecule in one of its eigenstates can be written as the sum of four terms which correspond to different motions of the molecule:



  
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### **குறுந்தொகையில் வாழ்வியல் சிந்தனைகள்**

#### **முன்னுரை**

சங்கஇலக்கியங்களில் ஒன்றான குறுந்தொகை புலவர்களின் மொழித்திறனையும் கற்பனை வளத்தையும் உரைப்பதோடு அக்காலத்து வாழ்ந்த மக்களின் வாழ்க்கைத் தரத்தையும் அவர்கள் வாழ்ந்த முறையையும் அகமாந்தர்கள் வழியேயும் புறநிலையிலும் வெளிப்படுத்துகிறது. அதாவது, தலைவன், தலைவி, தோழி போன்ற அகமாந்தர்களின் சிறப்பைக் காட்டும் அதேநேரத்தில் அக்காலத்து மக்களின் வாழ்க்கை நெறியையும் குறுந்தொகை குறிப்பால் உணர்த்துகிறது. இக்குறுந்தொகையில் அமைந்துள்ள நானூற்றொரு பாடல்களை 205 புலவர்கள் பாடியுள்ளனர். இக்குறுந்தொகைப் பாடல்களில் படிந்துள்ள சங்ககால மக்களின் வாழ்வியல் செய்திகளை ஆராய்வதே இக்கட்டுரையின் நோக்கமாகும்.

#### **அகபுற வாழ்க்கை**

மனித வாழ்க்கை அகம் புறம் என இருதிறத்தது அகவாழ்க்கை கணவன் மனைவி ஆகியோர் வாழும் குடும்ப வாழ்வாகும். புறவாழ்வில் பிறருடன் பழகுதல் தொழில் புரிதல் மரபுமுறைகளைப் பின்பற்றுவதல் போன்ற பிறசெய்திகளும் இடம்பெறுகிறது.

#### **உண்மையான அன்பு**

அகஇலக்கியத்தில் காதல் வாழ்வுவிதந்தோதப்படுகிறது ஊழ்வினைவயத்தால் முன்பின் அறியாத உள்ளங்கள் இரண்டு அன்பால் இணைந்த காதல்வாழ்வைக் குறுந்தொகை நூல்,

யாயும் ஞாயும் யாராகியரோ?

எந்தையும் நுந்தையும் எம்முறைக் கேளிர்?

யானும் நீயும் எவ்வழி அறிதும்?

செம்புலப் பெயல்நீர் போல

அன்புடை நெஞ்சம்தாம் கலந்தனவே "1





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### தமிழில் இலக்கண வளர்ச்சி

#### முன்னுரை

தமிழ் இலக்கணம் என்பது முத்தமிழில் ஒன்றான இயற்றமிழின் இலக்கணத்தைக் குறிப்பது. செய்யுள், உரைநடை ஆகியவற்றின் தொகுதியாக இயற்றமிழ் உள்ளது. தொல்காப்பியம் இயற்றமிழில் கிடைத்துள்ள மிகப்பழைய இலக்கண நூல். இறையனார் அகப்பொருள் உரை மூலம் அகத்தியம் என்ற இலக்கண நூல் இருந்ததாக நம்பப்படுகிறது. அகத்தியம் நூல் கிடைக்கவில்லை. அதன் பின் தோன்றிய தொல்காப்பியம் என்ற நூல் குறித்தும் பிற இலக்கண நூல்களைக் குறித்தும் எடுத்துரைப்பதே இக்கட்டுரையின் நோக்கமாகும்.

#### இலக்கண நூல்கள் விளக்கம்

தமிழில் இலக்கண நூல்கள் செய்யுள் வடிவத்தையும், உரைநடை வடிவத்தையும் கொண்டுள்ளன. பழந்தமிழ் இலக்கண நூலான தொல்காப்பியம் செய்யுள் வடிவில் அமைந்த இலக்கண நூலாகும். தொல்காப்பியத்தை பின்பற்றி பல இலக்கண நூல்கள் செய்யுள் வடிவில் இயற்றப்பட்டன.

#### தமிழ் இலக்கண நூல்கள்

அகத்தியம், தொல்காப்பியம், இறையனார் களவியலுரை, புறப்பொருள் வெண்பாமாலை, பன்னிரு படலம், யாப்பருங்கலம், யாப்பருங்கலக் காரிகை, வீரசோழியம், இந்திரகாளியம், நேமிநாதம், சின்னூல், வெண்பாப் பாட்டியல், தண்டியலங்காரம், அகப்பொருள் விளக்கம், நன்னூல், நம்பி அகப்பொருள், பன்னிரு பாட்டியல், நவந்தப் பாட்டியல், சிதம்பரப் பாட்டியல், மாறனலங்காரம், மாறன் அகப்பொருள், சிதம்பரச் செய்யுட்கோவை, இலக்கண விளக்கம், இலக்கண கொத்து, தொன்னூல் விளக்கம்.

#### தொல்காப்பியம்

தொல்காப்பியம் ஐந்திலக்கண நூலாகும். தொல்காப்பியத்தில் உள்ள அதிகாரங்கள் = 3 (எழுத்ததிகாரம், சொல்லதிகாரம்,



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## **தமிழர் வாழ்வில் அறநெறி கோட்பாடு**

**முன்னுரை**

"அறம் எனப்படுவது யாதெனக் கேட்டின்

மறைவாது இது கேள்மன்னுயிருக்கு எல்லாம்

உண்டியும் உடையும் உறையுளும் அல்லது

கண்டதில்லை " 1

மனிதன் தனக்கென வரையறுத்துக் கொண்ட ஒழுக்கம் முறை இலக்கணம் அறம் ஆகும். சமுதாயத்தில் மனிதன் உயர்வு பெறவும் , இன்புற்று வாழவும் அற வாழ்க்கையை அவசியம். தமிழ் இலக்கியத்தில் பேரிலக்கியம், சிற்றிலக்கியம் என இரண்டு இலக்கியத்திலும் அற நூல்கள் காணப்படுகின்றன.

**அறம் பொருள் விளக்கம்:**

'அறம் செய் ' என்று சொல்வது மிகவும் எளிமை. ஆனால் அற வாழ்வில் வாழ்ந்து , அவ்வழியை கடைபிடிப்பது என்பது மிகவும் கடினம். உலகம் பொதுமறையாம் திருக்குறளில் பொறாமை, பேராசை, கடுஞ்சொல், கோபம் ஆகியவற்றை நீக்கி வாழ்வதே அறமென கூறுகிறது. மக்களது அடிப்படை தேவையான உணவு, உடை ,உறவிடம் இவற்றை கொடுத்தலே அறம் என்று மணிமேகலை காப்பியம் கூறுகிறது. அறம் என்பது இல்லறம், துறவறம் என இரண்டு பிரிவாக பிரிக்கப்படுகிறது. இல்லறம் என்பது கொடுத்தலும் , அளித்தலும் , கோடலும், இன்மையும், ஒழுக்கம், புணர்தல் , புணர்ந்தோர்ப்பேணல் இவை யாவும் இல்லறமாகும். துறவறம் என்பது துறவும் , அடக்கமும், தாய்மையும், தவமும் , அறிவினை ஒம்பலும், மறவினை மறுத்தலும் துறவறம் என்று பொருள் கொள்ளலாம்.

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International conference on Technological Emerging Challenges in Computer Science and Engineering Organized by Department of Computer Science, Tirumala Engineering College, Jonnalagadda, Narasaraopet, Andhra Pradesh, India. This conference provides an international forum for researchers, developers, engineers and practitioners who are involved in real time projects that provide solutions to exchange their valuable ideas and showcase the ongoing works which may lead to path breaking foundation of the futuristic engineering. It accentuates indispensability of interdisciplinary and cross – linked thinking with respect of innovation and market opportunities. All the accepted paper will be published in International Journal with ISSN Approved by UGC. Selected papers will be published in Scopus Index Journals.



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# APPLICATIONS OF BIPOLAR- VALUED HESITANT FUZZY GRAPH

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## **Abstract:**

Bipolar Valued Hesitant Fuzzy Graphs (BVHFGs) represent a versatile mathematical framework that extends traditional graph theory to model uncertainties and hesitancies inherent in real-world decision-making processes. The incorporation of bipolar-valued hesitant fuzzy sets in graph structures offers a robust methodology to handle conflicting and ambiguous information, essential in diverse applications across various domains. This paper explores the applications of BVHFGs in different fields, including but not limited to transportation networks, social network analysis, medical diagnosis, image processing, and decision support systems. The flexibility of BVHFGs in capturing the uncertain and hesitant nature of information allows for more accurate modeling of complex systems, facilitating enhanced decision-making and problem-solving capabilities.

**Keywords:** Fuzzy graph, Bipolar Graph, Hesitant fuzzy graph, Bipolar Hesitant Fuzzy graph.

## **Introduction:**

In the realm of decision-making, various real-world scenarios often involve uncertainties, ambiguities, and hesitancies that complicate the process of modeling and analysis. Traditional graph theory, while effective in representing relationships among entities, often falls short in accommodating the inherent vagueness and ambiguity present in many practical situations. To address these challenges, Bipolar Valued Hesitant Fuzzy Graphs (BVHFGs) emerge as a robust and versatile mathematical framework that extends conventional graph theory by incorporating bipolar-valued hesitant fuzzy sets.

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## AN INTRODUCTION TO NEUTROSOPHIC BITOPOLOGICAL SPACES.

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### ABSTRACT:

This paper discusses the concept of Pairwise Neutrosophic Generalized  $\beta$ -Continuous Function in Neutrosophic Bitopological Spaces. Neutrosophic Bitopological Spaces:  $N\tau_1\tau_2$  - Generalized  $\beta$  Closed Sets and their Properties; and Neutrosophic Ideal Bitopological Spaces:  $\tau_1\tau_2$  - Generalized  $\beta$  Closed Sets.

Key Word: Neutrosophic Bitopological Spaces,  $\beta$  -open set,  $\beta$ -Continuous Function.

### 1.INTRODUCTION:

Zadeh first proposed fuzzy sets, or FS for short, in 1965. Chang then extended the idea of topology to fuzzy sets, introducing the fuzzy topological space. In 2017, Dutta and Tripathy used fuzzy topological space to study fuzzy  $b$ -  $\theta$  open sets. Later, in 1998, Smarandache expanded on the intuitionistic fuzzy set (also called the IF-set) to create the concept of the neutrosophic set (also called the N-set), in which each element has three independent membership values: truth, indeterminacy, and false.

Later, Salama and Alblawi created neutrosophic topological space, or simply NT-space, by extending the ideas of fuzzy topological spaces to N-sets and applying topological principles to them. Furthermore, generalized N-set was defined by Salama and Alblawi, who also proposed the notion of generalized NT-space. Subsequently, Arokiarani et al. studied different functions in neutrosophic topological spaces and introduced the notion of neutrosophic point. Using NT-spaces, Rao and Srinivasa investigate the ideas of neutrosophic pre-closed (or short NP-C) and neutrosophic pre-open (or short NP-O) sets.

Kelly first proposed the idea of bitopological spaces in 1963 as an expansion of topological spaces. There has been research on this idea in relation to other set structures. As a result, we believe that building a bitopological space atop the neutrosophic set structure is essential and crucial.

In 1998, Samarandache presented the neutrosophic set. The three independent objects that make up the neutrosophic set  $N$  are falsity-membership  $FN(x)$ , indeterminacy-membership  $IN(x)$ , and truth-membership  $TN(x)$ .

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## APPLICATIONS OF DOMINATION IN GRAPHS

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### Introduction:

Domination in graphs has applications to several fields. Domination arises in facility location problems, where the number of facilities (e.g. hospitals, fire stations) is fixed and one attempts to minimize the distance that a person needs to travel to get the closest facility. A similar problem occurs when the maximum distance to a facility is fixed and one attempts to minimize the number of facilities necessary so that everyone is serviced. Concepts from domination also appear in problems involving finding sets of representatives, in monitoring communication or electrical networks and in land surveying.

e.g. minimizing the number of places a surveyor must stand in order to take height measurements for an entire region.

### Locating Radar Stations 5.1

The problem was discussed by Berge. A number of strategic locations are to be kept under surveillance. The goal is to locate a radar for the surveillance at as few of these locations as possible. How a set of locations in which the radar stations are to be placed can be determined.

### Nuclear Power Plants 5.2

There are various locations in a nuclear power plant. An arc can be drawn from a location X to a location Y if it is possible for a watchman stationed at X to observe a warning light located at Y. How many guards are needed to observe all of the warning lights, and where should they be located can be found easily using the concept of domination.

At present, domination is considered to be one of the fundamental concepts in graph theory and its various applications to ad hoc networks, biological networks, distributed computing, social networks and web graphs partly explain the increased





## ON HOMOMORPHISM AND DERIVATION ON $C^*$ -TERNARY ALGEBRAS

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### ABSTRACT:

We investigate homomorphisms between  $C^*$ -ternary algebras. We will discuss homomorphisms in  $C^*$ -ternary algebra with additive functional equations

$$f(z-x) + f(z-y) = -\frac{1}{2} f(x+y) + 2f\left(z - \frac{x+y}{4}\right). \text{ Also we present approximate}$$

approximate bi-homomorphism and bi-derivations on  $C^*$ -ternary algebras. Finally we prove the Jordan homomorphisms in  $C^*$ -ternary algebras.

### Keywords:

Bi-homomorphism, Bi-derivations, Jordan homomorphisms,  $C^*$ -ternary algebras.

### 1. INTRODUCTION:

Functional Equations have a long and distinguished history but only the latter part of this century brought a large process in this branch of Mathematics. The theory of functional equation is rapidly developing. In 1352 Oresme first time used the theory of functional equations. Functional equation is a growing branch of mathematics and it has rich applications in many branches of science and technology. The theory of functional equation is very old in the field of mathematical analysis. The significant growth in this field developed from 1769 onwards. Functional equation have developed beautiful and powerful ideas by building a large number of methods

### 2. PRELIMINARIES:

#### Definition 2.1 :

Functional equations are equations for unknown functions instead of unknown numbers. (Eg) If

$$f(x+7) = x^2 - 5x + 2 \text{ then } f(x) = x^2 - 9x + 16$$

A ternary Algebra  $A$  is an algebraic structure equipped with a ternary product  $m_3: A \otimes A \otimes A \rightarrow A$ .

#### 2.3

A  $C^*$ -ternary algebra is a complex Banach space  $A$ , with a ternary product

$(x, y, z) \mapsto (x, y, z)$  of  $A^3$  into  $A$ , which is linear in the outer variables, conjugate  $C$ -linear in the middle variable, and associative.

Also it satisfies,  $\|[x, y, z]\| \leq \|x\| \cdot \|y\| \cdot \|z\|$  and  $\|[x, x, x]\| = \|x\|^3$ .







## THE DIFFICULTIES POSED BY SECURITY ISSUES RELATED TO BIG DATA IN CLOUD COMPUTING

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### Abstract

Today, a wide range of industries, enterprises, and organizations recognize the advantages of big data applications. The security issues around data in cloud computing are the main topic of this study. IT societies have advanced significantly as a result of cloud computing. Cloud-based big data apps are more beneficial and necessary for all end-user support services. Despite the fact that cloud computing is an open environment that offers all services online, there are still concerns around end user insecurity and unauthorized access. This is one way that cloud computing can be enhanced, providing safe data storage and anonymity with the appropriate methods and practices. The purpose of this study is to highlight current issues and research opportunities in security services.

**Keywords:** *Security issues, Networking, Big Data, Cloud Computing*

### INTRODUCTION

These days, big data and cloud computing are the hottest subjects in computer science. Researchers have shown interest in these two issues, in addition to designers and entrepreneurs.

The objective of the study is to identify the best method for extracting information from enormous volumes of various types of data. Companies need to update their frameworks to support a variety of applications. The level of excitement from different groups will determine how research on massive information applications develops. Big data is specific and it differs depending on the activity domain:

1. Healthcare
2. Science
3. Education
4. Governance
5. Sporting events
6. Banking processes.

To maintain consumer trust and business confidence while using big data, nearly all of these sectors require some data to be made publicly available, with the other data needing to be privacy-protected. Put another way, big data is transforming every aspect of business, including social insurance, retail, and agriculture. There are more and more chances to optimize processes and operations to squeeze out every last bit of efficiency due to the rate at which data is being gathered on every imaginable activity. Naturally, in the commercial world, an item should be



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# A CASE STUDY OF AUTHENTICATION TECHNIQUES WITH OTP VERIFICATION

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## ABSTRACT

Core banking is a set of services provided by a group of networked bank branches. Bank customers may access their funds and perform other simple transactions from any of the member branch offices. The major issue in core banking is the authenticity of the customer. Due to unavoidable hacking of the databases on the internet, it is always quite difficult to trust the information on the internet. To solve this problem of authentication, the proposed system is based on click based graphical password system that not only guides and helps the user for password selection but also encourages the user to select more random distributed passwords.

**Keywords**--Two-factor Authentication, Graphical Password, OTP.

## I. INTRODUCTION

For the most part, user authentication is a basic part of computer security. It offers the framework for user accountability and access control. Although there are many different kinds of user authentication systems, the most popular kind is alphanumeric usernames and passwords. The customer's authenticity is the main problem in core banking. It is never easy to trust information found on the internet because of the inevitable hacking of database sites. We are putting forth an algorithm based on image processing, enhanced steganography, or visual cryptography, to solve this authentication problem.

It is commonly known that text-based passwords used in knowledge-based authentication mechanisms (KBAM) present a problem. Helping users choose the best password is the aim of an authentication system. The graphical password is an alternative to the alphanumeric

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# Surveying Resource-Efficient Approaches and Charting Future Paths for Optimization

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## ABSTRACT

Scaling model parameters and training data has produced interesting results in recent work on natural language processing (NLP); yet, relying solely on scalability to improve performance also increases resource usage. These resources come in the form of energy, time, storage, and data, all of which are naturally scarce and unequally distributed. This encourages the development of effective techniques that need less resources to produce equivalent effects. Effective natural language processing techniques and discoveries are compiled and related in this survey. In addition to offering advice on how to conduct NLP with restricted resources, our goal is to identify prospective research avenues for the advancement of more effective techniques.

**Keywords:** *Data quality, Self-paced learning, Model design, Hyper- parameters, NLP*

## I INTRODUCTION

Since some capabilities appear only after models expand beyond a certain size, scaling has become essential to obtaining state-of-the-art performance in NLP (Figure 1).

Nevertheless, scaling has advantages, but it also presents significant obstacles to making these discoveries feasible in resource-constrained settings[1]. To address these issues, research aiming at enhancing model efficiency has received fresh attention.

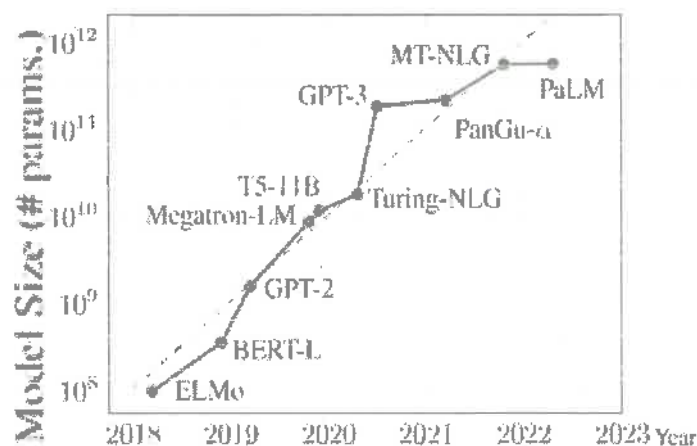


Figure 1: Exponential growth in the number of parameters in pre-trained language models



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## Iris Recognition through Deep Learning Fusion of Left and Right

### Iris Imaging: A Convolutional Neural Network Approach

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#### ABSTRACT

People from all areas of life are discussing how to correctly identify an individual and retain information securely in the contemporary digital era. Although a single biometric identification cannot manage a range of increasingly complex and varied authentication scenarios, biometric identification is now a more feasible and secure technique of identity verification. By employing multimodal biometric technologies, identification accuracy and safety can be increased. This technology is being used by numerous businesses, governments, and multinational organizations to secure sensitive data. The biometric driver's license and passport have become more common in recent years. Multimodal biometric recognition systems are used by industry experts and researchers to improve the security and resilience of the system. While single-mode biometric systems have shown promise, their reliance on a single modality leaves them vulnerable. Experts in biometrics choose a multimodal system. The techniques that can be combined include voice recognition, signatures, iris, fingerprint, facial recognition, and more. There are multiple authentication phases in India's biometric identity system, which was introduced in 2009. In this paper, we suggest an iris identification system based on the combination and categorization of the left and right iris. All of this was accomplished by using Deep Learning technology, with three CNN architectures being used in the tests.

**Keywords – Authentication, Biometric, Deep learning, CNN**

#### I. INTRODUCTION

People's awareness of information security has grown over the past several years due to advancements in science and technology [1]. Information security was pioneered by biometrics. The ability to collect physical data about an individual has improved with the introduction of extremely complex computers and acquisition tools. The security of password systems for computers, mobile devices, government websites, banks, private residences, etc., can be increased or replaced with this data. Physiological or behavioral biometric techniques are available. The physiological modalities include facial recognition, fingerprint recognition, iris recognition, and hand geometry. In any other case, the behavioral







## Pre-Processing Technique for Brain Tumor

### Detection and Segmentation

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#### ABSTRACT

Magnetic Resonance Imaging (MRI) is one of the power full visualization techniques, which is mainly used for the treatment of cancer. Magnetic Resonance Imaging is a radiation-based technique which represents the internal structure of the body in terms of intensity variation of radiated wave generated by the biological system when it is exposed to radio frequency pulses. Magnetic resonance imaging is used for the diagnosis of diseases related to soft tissues. When we interpret or inspect brain images, we should be aware of the image contrast, because all the information about the brain is mapped into intensity variation. The presences of materials which can affect the strong magnetic field can produce artifacts and intensity variation in the image. Artifacts are some extra features that are not related to original image. These features are introduced in the image during image acquisition. Artifacts and intensity variation affect the quality of analysis. So we need an efficient rectifying methodology for the removal of artifacts and intensity variation present in the image. Pre-processing techniques makes the image suitable for further processing; it enhances the quality of the image and finally removes the noise present in the Image. Pre-Processing techniques aim the enhancement of the image without altering the information content. Here we discuss most relevant and important pre-processing techniques for MRI images before dealing with brain tumour detection and segmentation.

**Keywords:** Brain Tumor, Pre-processing, Segmentation, Image re-sampling, Skull Stripping, Contrast Enhancement, Noise Removal, Histogram Equalization

#### 1. INTRODUCTION

Magnetic Resonance Imaging (MRI) is one of the power full visualization techniques, which is mainly used for the treatment of cancer. Using MRI image technology, the internal structure of the body can be acquired in a safe and invasive way. Magnetic Resonance Imaging is a



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# Navigating the Landscape of the Internet of Things: Enabling Technologies, Challenges, and Synergetic Approaches for Advancement

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## ABSTRACT

The Internet of Things is the topic of this piece of writing. The integration of many technologies and communications solutions is the primary factor that is enabling this promising paradigm. The most important ones are distributed intelligence for smart things, better communication protocols (shared with the Next Generation Internet), wired and wireless sensor and actuator networks, and identification and tracking technologies. It is understandable that any significant advancement in the Internet of Things will require collaborative efforts across various disciplines, including electronics, informatics, telecommunications, and social science. This survey is intended for people who wish to explore this difficult topic and aid in its advancement in such a complex setting. Various perspectives on this Internet of Things concept are discussed, and supporting technologies are examined. What becomes clear is that the scientific community will continue to encounter significant challenges. The ones that are most pertinent are discussed in-depth.

**Keywords:** *Internet of things(IoT), Radio-Frequency Identification (RFID), Sensor, Service Oriented Architecture (SOA).*

## I.INTRODUCTION

In the context of contemporary wireless telecommunications, the Internet of Things (IoT) is a unique paradigm that is quickly gaining traction. The fundamental idea behind this concept is that there are many different things or objects all around us, including RFID tags, sensors, actuators, mobile phones, and other items, that can communicate with one another and work together to accomplish shared objectives thanks to special addressing schemes [1].



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# Enhancing Mobile Cloud Privacy: A Lightweight CP-ABE-Based Data Sharing Scheme

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## Abstract

Due to the advancement and widespread availability of smartphones with increased capacity, mobile cloud computing has gained particular attention recently. This has pushed data owners to outsource more data to the cloud in order to accommodate the growing number of mobile users. Due to their limited memory, transmission capacity, and storage capacity, cell phones struggle to handle large amounts of complex data. This means that a large amount of data needs to be transferred to the cloud. However, these outsourcing compromises privacy and makes the data accessible to unauthorized parties. For cloud data privacy and access control, ciphertext policy attribute-based encryption (CP-ABE) schemes are the most effective option. However, because CP-ABE schemes increase computation overhead during encryption and decryption, they are not appropriate for lightweight devices. We present a lightweight, secure data sharing scheme (LDSS) for cloud computing that is easy to use in this paper. It understands CP-ABE (Cypher text policy Attribute Based Encryption), a common cloud condition entrance control innovation. Nonetheless, it demonstrates that LDSS was successful in reducing the overhead on mobile device conditions when users are exchanging data in environments that are portable clouds.

**Keywords** – Access Control, Ciphertext – policy attribute-based encryption, Data privacy and security, LDSS, Mobile Cloud Computing, User revocation.

## I. INTRODUCTION

The goal of Mobile Cloud Computing (MCC), which combines cloud and mobile computing, is to provide cloud computing providers, network operators, and portable clients with rich computational resources. Enabling the execution of rich mobile applications with a richer user experience across a wide range of mobile devices is the ultimate goal of MCC[1]. MCC offers



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## SELECTIVE IMPUTATION TECHNIQUES IN RECOMMENDER SYSTEMS

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### ABSTRACT:

The swift advancement of information technology has led to the emergence of online businesses, where things are sold through multiple websites. Recommender systems assist users in choosing worthwhile products. Sparsity is the primary issue with such a system. We suggest a preprocessing mechanism in this paper. and two techniques are applied to impute missing data before the optimal technique is chosen based on time complexity.

**Keywords:** *Imputation, Singular Value Decomposition, Principal Component Analysis, Recommender System, Collaborative Filtering*

### I. INTRODUCTION:

The use of computers and other communications technology for data transmission and manipulation, usually within the framework of a business or other entity, is known as information technology. An analytical technique called data mining (DM) aims to glean valuable information from vast volumes of data. It covers a range of strategies, including preprocessing, and supervised and unsupervised learning techniques. A recommender system gives users recommendations for products to buy. Another name for this kind of system is a suggested system. Generally speaking, recommender systems can be divided into three categories: content-based, collaborative filtering (CF), and hybrid. There are two types of collaborative filtering systems: item-based and user-based.

The ratings provided by users in a user-based CF system are shown as a  $(M \times N)$  user-item matrix, the elements of which are the ratings provided by  $M$  users for the corresponding  $N$  items. The user-item matrix is often sparse. This paper has been organized as follows. Section 2 discusses the related works in detail. Section 3 discusses about data format, row elimination, column elimination, and imputation of missing values. Section 4 discusses the experimental results. Section 5 concludes the analysis. Section 6 specifies the future enhancement.

### II. RELATED WORKS:

Basic ideas including data format, CF methodologies, CF tasks like recommendation and prediction, similarity measures, and evaluation metrics utilized in the CF system were



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## Social Media Recommendation Powered by Deep Learning Based on User Feedback

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### Abstract:

Review systems are being developed these days using social media. Systems of recommendations (RS). While there is a growing body of research on social media research related to rapid science, there is still a need for improvement in the comprehensive literature review and classification of this research. The earlier approach failed to locate any user reviews in a timely manner, resulting in low accuracy and ineffective filtering of irrelevant comments. To address this method's drawback, the Recursive Neural Network-based Trust Recommender System (RNN-TRS) is suggested. Thus, Analyzing the trust comment and eliminating the unnecessary sentence is an effective method. acceptable. First, data must be gathered using the transactional model assessments of social media. Preprocessing the dataset with Imbalanced Collaborative Filtering (ICF) to eliminate null values is the second step. Utilizing the Maximum Support Grade Scale (MSGs), extract the features from the pre-processing stage in order to grade the weights (length, count, etc.) and extract the maximum number of scaling features in the dataset. The SoftMax activation function is evaluated in the feature weights section of the training and testing method prior to the extraction of features in order to determine the average weights of the features. Lastly, the system analyzes user reviews based on positive and negative scores using the Recursive Neural Network-based Trust Recommender System (RNN-TRS) in the classification method. Compared to earlier techniques, the simulation results increase prediction accuracy and decrease time complexity.

**Keywords:** Recommendation systems (RS); social media; recursive neural network-based trust recommender system (RNN-TRS); user reviews



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## The applicability of Convolutional neural network models

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### Abstract

Numerous industries have made extensive use of deep learning. Convolutional Neural Networks are found to provide the most accurate results in deep learning when used to solve real-world problems. We provide a thorough overview of CNN's uses in natural language processing and computer vision in this paper. We outline the main applications of CNN in computer vision, including document analysis, action recognition, face recognition, scene labelling, image classification, and human pose estimation. We also go over how CNN is applied to natural language processing in the areas of speech recognition and text classification. To solve the same problem, we compare CNN with other approaches and discuss why CNN performs better than other approaches.

**Keywords:** Deep learning, CNN model, Convolutional neural

### Introduction

A deep learning architecture called Convolutional Neural Networks (CNNs) is modelled after the structure of the visual system. This network, which is largely regarded as CNN's forerunner, operated by arranging neurons in a hierarchical structure to transform images. Created the LeNet-5 multi-layer artificial neural network, which laid the foundation for CNNs. In order to identify patterns straight from raw pixels, LeNet-5

could be trained using the backpropagation algorithm, which eliminated the need for an additional feature extraction mechanism and allowed it to be used for the classification of handwritten digits. However, despite all of these benefits, Recurrent Neural Networks (RNN) are typically used to solve Natural

### Language Processing

(NLP) problems because of the lack of large training data and computational power at the time. Additionally, CNNs have been used to tackle the speech recognition problem, which is essentially a major NLP research task. With hundreds of variables speech





## Data Protection in Mobile Ad Hoc Networks Using Pattern

### Discovery-Based Routing Attack

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#### ABSTRACT:

Mobile ad-hoc networks, or MANETs for short, are unavoidably autonomous systems that will play a crucial role in the upcoming Modern Web of Things communication, where powerful devices will be arranged in a completely dispersed manner. However, because to their lack of a basis and lack of cohesive structure, MANETs are vulnerable to several security threats. Certain internal mobile hubs inside these asset-obligated systems have the ability to negotiate the directing tool in order to conduct administrative assaults in order to accomplish specific types of malicious bundle sending operations. In any case, to address this problem, MANETs are vulnerable to a variety of security risks due to their lack of a framework and apparent lack of cohesive organization. Certain internal flexible hubs in these asset-obligated systems may bargain the directing component to send out denial-of-service attacks to finish particular types of illicit package delivery. In order to describe this issue, we carry out a sharpened analysis of TRSPD, which is finished by oscillating forecasts of different parameters in particular framework conditions while keeping three evident bundle dropping defects in mind. We have integrated expanded sensitivity analysis of TRS-PD in our proposed work to counteract many types of assaults, including worm hole, black hole, grey hole, sybil, and energy depletion attacks. To ensure secure data transactions, the MD5 algorithm is employed for security purposes. The comparison between the two current attacks and our three targeted attacks will be displayed in the end.

**KEY WORDS:** Energy Depletion, Wormhole, Sybil, Ad Hoc Networks, TRS-PD.

#### 1. OVERVIEW

Remote Systems are a type of Mobile Ad hoc Networks (MANET).





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## A REVIEW OF THE LITERATURE ON TRAINING AND DEVELOPMENT IN THE WORKPLACE

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### SYNOPSIS

This study examines the body of research on training and development, which is seen as a critical component of Human Resource Management (HRM) practices and an expenditure that should be allocated heavily from an organization's budget. In addition to giving businesses a competitive edge, training and development are essential for addressing global concerns and innovation. Most significantly, though, they are an ongoing process that improves an organization's performance. The present understanding of the determining factor and the significance of training and development for HR management in particular, as well as for businesses in general, are the main topics of this literature study. This paper also attempts to review the literature about current understanding and pertinent theories regarding training and development and its connection to performance, innovation, and competitive advantages in businesses. Since it is a review based on data from earlier literature reviews and research connected to this topic, it will add to the body of existing literature. It also makes recommendations for more future investigations.

**Keywords:** *Work environments, innovation, competitive advantage, training, and development*

### I OVERVIEW

Every organization's foundation and most important resource is its human capital (Khan et al., 2011). HR management is in charge of all facets of hiring, on boarding, and managing managers and staff for companies. According to earlier research, human resources (HR) are valuable assets whose aptitudes and proficiencies foster the growth of goods and services (Kelly, 2001). Armstrong (2016) asserts that HRM promotes employee convenience, growth, and selection in cohesive and integrative businesses. Moreover, optimizing the company's HR payoffs while lowering potential material losses is the goal of HR management. Additionally,



  
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## An Analysis of Consumer Knowledge of Green Marketing with Particular Reference to Bangalore City

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### **Abstract:**

India has simultaneously seen a rise in environmental production awareness. As the public became interested in environmentally friendly products, businesses naturally began to produce environmentally friendly products for the market. People in India are suffering from a variety of environmental issues, such as climate change, tsunamis, and water scarcity. In order to use less paper and plastic when marketing their products, green marketing has been implemented. This raises consumer awareness of environmental issues and draws them to the product. The goal of this study is to determine how aware consumers are of green marketing, which encompasses a wide range of activities such as modifications to the production, packaging, and advertising processes, as well as product modification. With the aid of a questionnaire, data was gathered for the sample size of roughly 175 and selected using a straightforward random sampling technique.

**Key words:** *environmentally friendly, green, and marketing.*

### **I.Introduction:**

Producing goods without harming the environment and fostering a safer living environment is known as green marketing. The use of environmentally friendly products has been sharply rising annually. Every company needs to have a plan in place to stay in business. As a result, they have embraced green marketing and have begun to create environmentally friendly goods, packaging, processing, recycling, etc. Comparatively, it is more expensive to switch from producing standard products to ones for green marketing. Raising consumer awareness is the primary goal of the green marketing concept. The purpose of this study is to raise consumer awareness of green marketing. Being truly "green" is essential when discussing and thinking about green products.



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## "A JOB SATISFACTION STUDY AMONG TVS INDUSTRIES PRIVATE LIMITED EMPLOYEES"

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### ABSTRACT

TVS INDUSTRIES PRIVATE LIMITED, HOSUR is the study's location. The project's main concern is the worker's degree of job satisfaction. One's attitude towards one's work is referred to as job satisfaction. When an employee's expectations are met or exceeded, they feel satisfied. Increased job satisfaction will lead to a rise in organisational commitment.


Higher productivity is the outcome of this. This paper's primary goals are to evaluate job satisfaction, determine its effectiveness, and identify the various organisational and personal factors that affect employees' job satisfaction. A sample of ninety-five responders was used in this investigation. For research analysis, chi-square and percentage analysis have been included. The study assisted in identifying the degree of employee satisfaction with respect to the different elements offered by the company. This study unequivocally demonstrates that workers at the organisation are generally content with their jobs. The company ought to take into account things like pay, the rapport between staff members and managers, how grievances are handled, and providing more opportunities for new hires.

**KEY WORDS:** - *evaluate job satisfaction, grievances are handled, opportunities for new hires.*

### I.Introduction

One of the most crucial aspects of a person's life is their job. Their occupations have an impact on their social and lifestyle choices. Because of this, every organisation needs contented employees. These days, the private sector is crucial to improving Pakistan's economy. In addition to offering excellent services, they also give a lot of people access to employment opportunities. The purpose of this study is to determine employee job



  
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## THE CURRENT SCENARIO'S EFFECTIVENESS OF ONLINE ADVERTISING

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### ABSTRACT:


The most effective form of promotion at the moment is internet advertising. Because the internet serves as the main channel for delivering promotional messages to customers or end users, it is also known as Internet advertising. There is a growing array of online promotional tools available, such as display advertising (which includes web banners), email marketing, social media marketing, and mobile advertising. This study demonstrates the effectiveness of online advertising as well as its usefulness and justification. The study also looks at the influencing elements of online advertising and how it affects consumers' purchasing decisions.

**Keywords:** *social media, digital marketing, online advertising, and factors influencing online advertising*

### INTRODUCTION

The most effective form of promotion is advertising. Online advertising typically consists of two parties: publishers who embed advertisements in their online content and advertisers who supply the advertisements that are displayed in the publisher's content, similar to many other forms of display advertising. Agencies that assist in creating and distributing advertisements are another possible source of funding. Advertising copywriters; ad servers, which offer tracking data and ads; and advertising partners, who carry out independent advertising on behalf of sponsors. The Internet is a flexible medium for advertising. It differs from traditional advertising media in this regard. This highly adjustable media lets you adjust it to suit your needs on the fly during the event and won't cost you a lot extra. This increases the



  
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பாரதியின் பாஞ்சாலிசபதம்பெண்ணியப் பார்வை

**முன்னுரை**

இலக்கியங்கள் ஒவ்வொன்றும், அவை தோன்றும் காலக்கட்டத்தின் வெளிப்பாடுகளாக விளங்குகின்றன. தொடக்கக் காலப்படைப்புகளில் இருந்த ஆணாதிக்கப் போக்கு மறைந்து, இக்கால இலக்கியங்களில் ஆண், பெண் சார்ந்த சமத்துவ நோக்கு வளர்ந்துள்ளது. அத்தகைய படைப்புகளில் 'பெண்ணிய நோக்கு' குறிப்பிட்டத்தக்க ஒன்றாகத் திகழ்கிறது. அதனினும் மேலாகப் பெண்ணியப் படைப்புகளில் பெண்ணியச் சார்பும் பெண்ணின் மேலாதிக்கமும் விதந்து பேசப்பட்டு வருகின்றன. தமிழ்நாட்டில் பெண்ணியக் கருத்துகளையும் பெண்ணுரிமையையும் தீவிரமாக வலியுறுத்தி, பெண்ணியச் சிந்தனை பரவவும் பெண்ணியப் படைப்புகள் தோன்றவும் வழிவகுத்தவர்களுள் நடுவராகவும் அவர்களுள் முதன்மையானவராகவும் கொள்ளத்தக்க பாரதியின் பெண்ணியக் கருத்துகளை அவரது பாஞ்சாலி சபதத்தின் வழி ஆராய்வதாக இக்கட்டுரை அமைகிறது.

**பாரதியும் பாஞ்சாலிசபதமும்**

பழைய மரபில் காப்பியங்கள் தோன்வதற்கு வாய்ப்பு இல்லை என்னும்படியான 20ம் நூற்றாண்டிலும் காப்பியங்கள் தோன்றியுள்ளன. முதல் காப்பியமாக 1912ல் தெளிவான முகவுரையுடன் பாரதியின் பாஞ்சாலிசபதம் வெளிவந்தது. அது இரு பாகங்களையும் ஐந்து சருக்கங்களையும் கொண்டு எளிய நடையில் இயற்றப்பட்டுள்ளது. அதன் முகவுரையில் ""எனது சித்திரம் வியாசர் பாரதக் கருத்தைத் தழுவியது. பொரும்பான்மையாக, இந்நூலை வியாசர் பாரதத்தின் மொழிபெயர்ப்பென்றே கருதிவிடலாம். அதாவது 'கற்பனை' திருஷ்டாந்தங்களில் எனது 'சொந்தச் சரக்கு' அதிகம் இல்லை. தமிழ்நடைக்கு மாத்திரமே நான் பொறுப்பாளி என்று பாரதி உரைத்துள்ளார்.

**பெண்ணியம் - விளக்கம்**

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# International Multidisciplinary Conference -2021



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**Mrs.E.Kavitha**

**Assistant Professor,**

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**Hosur – 635 126.**

## நாட்டார் இலக்கியத்தில் மகளிரின் இசை

ஏட்டிலேழுதாத, எழுத்தில் காண முடியாத, உள்ளத்தில் ஊறிக் கிடக்கும் எண்ணங்களையும், இயக்கங்களையும், நம்பிக்கைகளையும், தன் உணர்வுகளையும், இசை வழியில், மனிதன் வெளிப்படுத்துவதே 'நாட்டார் இலக்கியம்' அல்லது 'நாட்டுப்புற இலக்கியம்' எனப்படும். நாட்டுப்புறஇசையானது , அன்று முதல் இன்றுவரை காடு, மேடு காற்றடிக்கும் திசையெல்லாம் , சுற்றி வளம் வந்து கொண்டு இருக்கிறது. அப்படிப்பட்ட , இந்த இலக்கியத்தில் பெண்கள் தங்கள் இடத்தை, எவ்வாறு பிடித்துள்ளனர்; என்றும் தங்கள் உணர்வுகளை எப்படி நிலை நாட்டுக்கார்கள் என்பதை சிறப்பாக கூறுகிறது.

மனித இனம் என்று தோன்றியதோ அன்றே நாட்டுப்புற இலக்கியம் அல்லது நாட்டார் இலக்கியமும் தோன்றி விட்டது என்று சொல்லலாம். பிறப்பு முதல் இறப்பு வரை இசையானது, தங்கள் வாழ்வில் ஒவ்வொரு நிலையிலும் முக்கியத்துவம் பெருகிறது. கிராமப்புற மக்கள் மத்தியில் வாழையடி வழையாக ரத்தமும்சதையுமாக இருப்பது நாட்டுப்புற இசையே.பெண்கள்தங்கள் உரிமையைநிலைநாட்ட , போராடிக் கொண்டுதான் இருக்கிறார்கள். ஆணும் பெண்ணும் சமம் என்று வாயால் பேசலாம். இந்திய சமுதாயத்தை பொறுத்தவரையில் , பெண் என்பவள் குடும்பத் தலைவியாகவும் , காட்சி பொருளாகவும், பிள்ளை பெற்று தருபவளாகவும், ஆணுக்கு அடங்கி நடப்பவராக, மட்டுமே இன்றுவரை புராணங்களிலும், இலக்கியங்களிலும் சித்தரிக்கப்படுவதை நாம் பார்க்கிறோம்; படிக்கிறோம். ஒரு குழந்தையை பெற்றெடுக்கும் போது தான் ஒரு பெண் முழுமை அடைகிறாள் ; அப்படித்தான் அவனை சுற்றியுள்ள சமுதாயமும் கருதுகிறது. இந்த நிலையில் நாட்டார்



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## சங்க இலக்கியகளும் திருமாலும்

### முன்னுரை

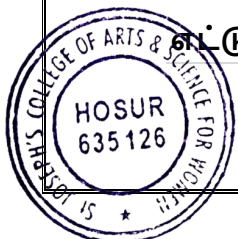
திருமாலை மேலானப் பரம்பொருளாகக் கொண்ட சமயம் வைணவமாகும். கி.பி. 7-ஆம் நூற்றாண்டு முதல் கி.பி 9 ஆம் நூற்றாண்டு முடிய வாழ்ந்த ஆழ்வார்கள் திருமாலின் புகழைப் பாடி பரவினர். தெய்வம் மனித நிலைக்கு வருவது மனிதன் தெய்வநிலையை எய்த வேண்டும் என்பதற்காகத் தான் என்பது வைணவ சமயத்தின் அடி நாதக் கருத்து. திருமாலே உயர்வற உயர்நலம் உடையவனாகவும், அமரர்களும் தொழும் பரம்பொருளாகவும் பாடினர். அவர்கள் பாடிய பாடல்கள் நாலாயிரதிவ்ய பிரபந்தம் என்ற நூலாக தொகுக்கப் பெற்றுள்ளது. இத்தகைய சிறப்பு வாய்ந்த வைணவ சமயத்தைப் பற்றி இனி காண்போம்.

### தெய்வ நிலை

வேத காலத்தில் இருந்த பல தெய்வக்கோட்பாட்டில் விஷ்ணு ஒரு சிறு தெய்வம். பசுக்கூட்டங்களைக் காப்பவன் என்று ரிக் வேதம் விஷ்ணுவைக் குறிப்பிடுகின்றது. மிகப் பழமையான தமிழ் இலக்கணமான தொல்காப்பியம் திருமாலை முல்லை நிலக் கடவுளாக "மாயோன் மேய காடுறை உலகமும்" என்று கூறுகிறது பண்டைத் தமிழ் இலக்கியங்களில் திருமாலின் மனித வடிவ அவதாரங்கள் பற்றிய செய்திகள் மிகுதியாகவும், விலங்கு வடிவிலான அவதாரச் செய்திகள் குறைவாகவும் காணப் படுகின்றது. திருமாலின் அவதாரக் கொள்கைகளைப் பரப்புவதை முக்கிய நோக்கமாகக் கொண்டவை புராணங்கள்.

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எட்டுத் தொகை



## About Conference

National Conference on Recent Innovations in Science & Engineering (RISE – 2021), Organised by: Sambhram Institute of Technology (SaiT), M.S.Palya, Bangalore India. This conference provides an international forum for researchers, developers, engineers and practitioners who are involved in real time projects that provide solutions to exchange their valuable ideas and showcase the ongoing works which may lead to path breaking foundation of the futuristic engineering. It accentuates indispensability of interdisciplinary and cross – linked thinking with respect of innovation and market opportunities. All the accepted paper will be published in International Journal with ISSN Approved by UGC . Selected papers will be published in Scopus Index Journals.



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# NATIONAL CONFERENCE ON RECENT INNOVATIONS IN SCIENCE & ENGINEERING

20<sup>th</sup> November 2021

## Editors

Dr. H.G.Chandrakanth  
Dr. C.V. Ravishankar

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## Nanoparticle synthesis and characterisation of Strontium titanate ( $\text{SrTiO}_3$ )

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### Abstract


In this article, Strontium titanate ( $\text{SrTiO}_3$ ) Nano powder has been synthesized through a sol-gel-hydrothermal method. The X-ray diffraction studies of  $\text{SrTiO}_3$  Nano powder have shown that the as-prepared powder was single phase, crystalline, and has a cubic perovskite structure ( $\text{ABO}_3$ ) with a lattice constant  $a = 3.903 \text{ \AA}$ . The prepared sample undergoing differential thermal analysis and UV-visible absorption spectroscopy. The transmission electron microscopic investigations have shown that the particle size of the as-prepared powder has a mean size of 34 nm. Then highly sensitive and selective sensors to  $\text{H}_2\text{S}$  based on glass substrate were fabricated successfully by screen-printing technique.

**KEYWORDS:** *sol-gel method, Strontium titanate, perovskite structure*

### INTRODUCTION

Pure  $\text{SrTiO}_3$  with a perovskite structure has been reported in the literature to have pseudocapacitive nanoparticle behavior.  $\text{SrTiO}_3$  is a typical perovskite-type oxide whose shape, size, crystallinity, chemical composition, and structure all have a significant impact on its physical characteristics. One of the most important multipurpose perovskites for the production of electronic devices, photoanodes for quantum dot-sensitized solar cells, and electroceramics is strontium titanate.  $\text{SrTiO}_3$  are also used in field effect transistors, thermistors, dielectrics, multilayer capacitors, electro-optical appliances, and



  
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## THE DIFFERENCES OF MODERNISM AND REALISM

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### ABSTRACT

*A comparative study of modernist and realistic inventive traits in Europe in the early 19th century is discussed right here underneath. The intention is to examine how political and social hierarchy had been stimulated by using each movement. The most convincing points located inside the modern scholarship mirror the resistance to the contemporary and revolutionary technique practised by artists of the emerging middle elegance. It will serve for the visible composition and political convictions of the instant as a ancient context. The essence of this investigation is to understand how social reform changed into added on through movements.*

**Keywords:** *Aestheticism, decadence and realism, modernism, naturalism, romance.*

### INTRODUCTION

In trendy phrases, 'modernism' may be stated to were characterized through an extreme and sometimes radical change far from culture and as a consequence the utility of latest and innovative modes of expression. Thus, many types of the past due 19th and early 20th centuries of artwork and literature are substantially unique from preceding ones. In concept, modernism incorporates the artistic manufacturing of artists and thinkers who watched "traditional" tactics to the arts, architecture, literature, religion, social institutions (or even lifestyles itself) obsolete in a now absolutely industrialised society.

Modernists have been alienated from what might be considered the Victorian morality and conference via fast social alternate and enormous studies (including social sciences). They nicely pursue progressive reactions to innovative changes, verify humanity's capability to shape and impact its climate via experimentation, era and medical development, and understand capacity limitations to 'development' in all regions of lifestyles if you want to update them with up to date, contemporary options.

In the lists of Modernism's dogmas that have been now to be challenged, or subverted, perhaps rejected completely, or at least meditated by way of a brand new "modernist," all the endurer certainties of idea and of the unquestioned presence of an all-seeing, all-effective 'builder' figures.

It could be greater correct to interpret modernism as a preference to assignment and look for alternatives to preceding age convictions, instead of that modernism categorically defied faith or prevented all the values and thoughts related to the Enlightenment. The beyond had to be regarded and treated as break free the prevailing period and became now situation to overhaul and inquiry via its axioms and undeniable authorities.

Perhaps the uneasy juxtaposition among the views articulated through two of the most popular and adorned poets Ezra Pound (1885-1972) of modernist poetry ill uses how much modernism is open to various interpretations or even fraught with seeming paradoxes, inconsistencies and inconsistencies. S. The artist's responsibility to explicit tradition turned into harassed by using Eliot (1888-1965) as the basic essence of subculture within the arts. In reality, Peter Childs, who describes the paradoxical, if no longer antagonistic styles of modern and reactionary region, worry of the new, and pleasure in the extinction of the vintage and





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### **சங்க இலக்கியத்தில் போர்**

**முன்னுரை:**

சங்க காலத்தில் மக்களின் வாழ்க்கை முறையை அகம், புறம் என்று பிரித்துக்காட்டினர் புலவர்கள். அவற்றுள் அகம் மனையியலையும், புறம் அரசியலையும் குறிப்பதாக அறியப்படுகிறது. இத்தகைய அகத்தையும் புறத்தையும் கூறும் நூல்களை மேற்கணக்கு நூல்கள் என்று கூறுவர் சங்கப் புலவர்கள். புலமைக்குப் பெருமையும், மதிப்பும் இருந்த சங்ககாலத்தில், சங்கப்புலவர்களின் வாழ்வு செம்மையுடைத்தாக இருந்தது. சீர்மிகு பண்பாலும், உரிமை காரணமாகவும் மன்னனை அவன் என்றும், புலவரை அவர் என்றும் கூறியிருப்பதை சங்கப் பாடல்கள் வழி அறியலாம். இத்தகைய புலவர்கள் அரண்மனைச் சென்று பாடுவது மட்டுமின்றி, பகைவர் நாட்டிடத்தே பாசறை அமைத்து தங்கியிருந்த மன்னனிடமும் சென்று பாடி பரிசில்கள் பெற்றுச் சென்றுள்ளனர். இத்தகு பெருமை மிகுந்த சங்கப்பாடல்களில் புறப்பாடல்கள் கூறும் போர் அமைப்பு பற்றி ஆராய்வதே இக்கட்டுரையின் நோக்கமாகும்..

**பாசறையின் தன்மை**

பகைவன் நாட்டில் போர் புரியும் மன்னன் அந்நாட்டில் தானும் தன்னுடைய படையும் தங்குவதற்காக அமைக்கும் இடமே பாசறையாகும். ஆய்ந்து கட்டிய கழலினை உடைய வேந்தனது கட்டோராகிய பாசறையானது, ஒருபக்கம் மலர் மாலையினை அணிந்த விறலியரின் ஆரவராத்துடனும், மற்றொரு பக்கம் முழங்குதலை உடைய முழவானது யாழிசையோடு ஒலிக்கும் முழக்கத்துடனும், கவிழ்ந்த மணிகளையும் சினத்திற்குக் காரணமான மதப்பெருக்கையும் உடைய போர்யானைகள் களிப்புற்று பிளிறியவையாக நிற்கும் நிலை உடையதாக இருக்கும் என்பதை,

“அவிழ்மலர்க் கோதையர் ஆட ஒருபால்

இமிழ் முழவம் யாமோடியம்பக் - கவிழ்மணிய

காய்கடா யானை ஒருபாற் களித்திரும்

ஆய்கழலான் கட்டூர் அத்து”<sup>1</sup>

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### சங்க இலக்கியங்கள் கூறும் உணவு முறைகள்

#### முன்னுரை

உணவே மருந்து என்ற பழமொழிக்கேற்ப சங்கக் கால மக்கள் அவர்கள் வாழக்கூடிய இடத்திற்கேற்பவும் சீதோஷ்ண நிலைக்கேற்பவும் தங்கள் வாழ்க்கை முறைகளை அமைத்துக் கொண்டு உணவுகளை உட்கொண்டு வந்தனர். அவர்கள் வாழ்வில் உணவு பரிமாறும் முறை, உணவு உண்ணும் முறை இவையெல்லாம் எந்த அளவிற்கு சிறப்பிடம் பெற்றிருந்து என்பதைப் பற்றியும் நோய்யற்ற வாழ்விற்கு ஏற்ற உணவு எவை எவை என்பதைக் குறித்தும் எடுத்துரைப்பதே இக்கட்டுரையின் நோக்கமாகும்.

#### சங்க கால மக்களின் உணவு

- குறிஞ்சி: மலையில் விளைந்த திணையைச் சோறாக்கியும், நெய்யில் பொறிக்கப்பட்ட இறைச்சியையும் உண்டனர்.
- முல்லை: காட்டு விலங்கின் இறைச்சிகள், காட்டுக் காய்கறிகள், சில நெல் வகைகள், மாம்பழம், வாழைப்பழம் போன்றவை உண்டு வந்துள்ளனர்.
- மருதம்: நெல் வகைகள், மரக்கறி வகைகள், ஊறுகாய், பயறு வகைகள் போன்றவை உண்டு வந்துள்ளனர்.
- நெய்தல்: நெய்தல் நிலத்தில் வாழ்ந்த மக்கள், நண்டுக் கறி, மீன் வகைகள் போன்றவை உண்டு வந்துள்ளனர்.
- பாலை: இனிய புளிக்கறி இடப்பட்ட சோற்றையும். கறியையும். இறைச்சியையும், உண்டனர்.

#### பண்டைய தமிழரின் உணவு:

தமிழ் இலக்கிய ஆதாரங்களைக்கொண்டு அ.தட்சிணாமூர்த்தி தனது தமிழர் நாகரிகமும் பண்பாடும் என்ற நூலில் "பண்டைய தமிழரின் உணவு" பற்றி குறிப்புகள் தந்துள்ளார். வாழ்ந்த நிலத்துக்கேற்பவும் குலத்துக்கேற்பவும் பண்டைய தமிழரிடையே உணவுகள் வேறுபடுகின்றன. எனினும், அநேக தமிழர்கள் சோறும், மரக்கறியும், புலாஜ்ஞுவும், மதுவும் விரும்பியுண்டனர் என்பது தெரிகின்றது. நெற்சோறு, வரகுச்சோறு, வெண்ணற்சோறு, நண்டுக் கறி, உடும்புக் கறி, வரால்மீன் குழம்பு, கோழியிறைச்சி வற்றல், பன்றியிறைச்சி, முயல், ஈயல், மாங்கனிச் சாறு, மாதுளங்காய்-



*(Signature)*





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**சு. தமிழ்ச்செல்வி நாவலின் தன்னம்பிக்கையுள்ள மங்கையர்**

**முன்னுரை**

ஒவ்வொரு மனிதனும் , பிறப்பு முதல் இறப்பு வரை பெறக்கூடிய அனுபவங்கள், அவர்களுக்கு இருக்கும் பண்புகள் , எல்லா சூழ்நிலையிலும் ஏற்படக்கூடிய உணர்வுகள் , இவற்றையெல்லாம் கலந்து வருவதே அனுபவம் எனப்படும் . மனிதர்களின் வெளித்தோற்றத்தை , வைத்து அவனின் பண்பை , கூறமுடியாது. மனதில் நின்று எழும் , அச்சம் , சினம், கோபம் ஆகிய இயல்புகளை அடிப்படையாகக் கொண்டதாகும். " பேசுதல் , எண்ணுதல், நேசித்தல் , பார்த்தல் ஆகிய, செயலை செய்கின்ற முறையில், மனிதனின் தன்னம்பிக்கை வெளிப்படுகின்றது; என்று அறிஞர் 'காரல்' கூறுகிறார் " 1

அவர் மனிதன், "மனதின் அடிப்படையில் , இரண்டாகப் பிரிக்கிறார். ' அகம் முகம் மற்றொன்று, புறமுகம்' . அகமுகம் என்பது, நாம் சிந்திக்க கூடியது. புறமுகம் என்பது , எச்செயலையும் அனைவரிடம் பகிர்ந்து கொள்ளும் திறமை . மனிதன் குழந்தை பருவத்திலிருந்து , பல்வேறு படிநிலைகளில், வளர்ந்து மாற்றங்களை தழுவுகிறான் . அவ்வளர்ச்சிக்கு உடல்நிலையிலும், மனதிலும் குடும்பத்திலும், சமுதாயத்திலும் கிடைக்கும் அனுபவமே தன்னம்பிக்கை ஏற்பட முக்கிய காரணமாகும்". என கூறுகிறார் . பொதுவாக மனிதன் வாழும்சூழலும் , கற்ற கல்வியும் , நட்பும், கொள்கை பிடிப்புமே, ஒருவரின் தன்னம்பிக்கை நிர்ணயிக்கும் , என்பதில் மிகை



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### இனிமையான வாழ்க்கைக்கு மூலிகையின் பங்கு

#### ஆய்வுச்சுருக்கம்

நாம் வாழும் இவ்வுலகில் நம்மால் புரிந்துக் கொள்ள முடியாத ஒரு விஷயம் எதுவென்றால் அது இயற்கை. அதன் அற்புதங்கள் தோண்ட தோண்ட புதிது புதிதாகக் கிடைத்துக் கொண்டே இருக்கின்றன. மனித குலம் உயிர்வாழ்வதற்கு தேவையான காற்று, உணவு, உடை, இருப்பிடம் ஆகியவற்றை அவை நமக்கு வழங்குகின்றன. அப்படிப்பட்ட இயற்கையின் அழகிய கொடை. தான் தாவரங்கள் (மூலிகைகள்) அவை எண்ணற்ற நன்மைகளை நமக்கு வழங்குகின்றன. தாவரங்கள் இல்லாமல் நாம் பூமியில் வாழ முடியாது. மரங்கள், மருந்து, காகிதம், எண்ணெய்கள் போன்றவற்றை நமது அன்றாட தேவைகளுக்கு தாவரங்களிலிருந்து நாம் பெறுகிறோம். மேலும் இந்த உலகத்தில் உள்ள மற்ற அனைத்து உயிரினங்களும் தாவரங்களை சார்ந்தே உயிர் வாழ்கின்றன.

#### மூலிகைகள்

பச்சை மற்றும் மென்மையான தண்டுகளுடன். மற்ற தாவரங்களோடு ஒப்பிடும்போது, இந்த தாவரங்கள் மிகக் குறைவான கிளைகளை உடையவை. மற்றும் மண்ணிலிருந்து எளிதில் வெளியேறும். புல் மற்றும் புதினா ஆகியவை மூலிகைகளுக்கு சில எடுத்துக்காட்டுகள்.

மூலிகைகள் சாதாரணமாக பக்க விளைவுகள் இல்லாதவை. மேலும் பல மூலிகைகளை நாம் தினசரி உணவிலும் பயன்படுத்தி வருகிறோம். ஆனால் மருத்துவ முறைகளில் உபயோகிக்கும் போது கடைப்பிடிக்க வேண்டிய பல நுணுக்கங்கள் இருப்பதால், மூலிகைகளின் முழுப்பயனை அடைய கைதேர்ந்த வல்லுநரின் வழிகாட்டலின் படி நடப்பதே சிறந்தது.

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**உளவியல் நோக்கில் மணிமேகலை**

**முன்னுரை**

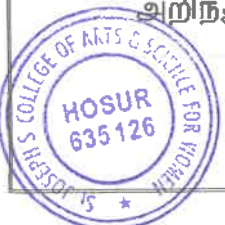
இலக்கியம் மக்களின் வாழ்க்கை பிரதிபலிக்கும் காலக் கண்ணாடியாகும். இலக்கியத்தில் வரும் மாந்தர்கள் உளவியல் அடிப்படையில் படைக்கப்பட்டன. தமிழ் இலக்கியங்கள் மெய்பாடுகளுக்கு முக்கியத்துவம் அளிக்கப்பட்டுள்ளன. வாழ்க்கைக்கு அடிப்படையான உளவியல் சிந்தைகளை இலக்கிய மாந்தர்கள் மூலம் அறிய முடிகின்றன. மனிதனின் ஒவ்வொரு செயலுக்கும் உந்துதலாக இருப்பது அவனுடைய உள்ளமே. அத்தகைய உள்ளத்தைப் பற்றி பல உளவியல் அறிஞர்கள் ஆராய்ந்திருக்கின்றார்கள். அவ்வகையில் குறிப்பிடத்தக்கவர் சிக்கமண்ட் பிராய்டு ஆவார். உளவியல் அடிப்படையாகக் கொண்டு மணிமேகலைக் காப்பியத்தை அணுகுவது கட்டுரையின் நோக்கமாகும்.

**உளவியல் அல்லது மனோதத்துவம்**

உளவியல் என்பது மனதின் செயல்பாடுகள் மற்றும் நடத்தைகளை அறிவியல் முறையில் ஆய்வு செய்யும் கற்றல் மற்றும் பயன்பாட்டு ஒழுங்கு முறையாகும். இந்தத் துறையின் தொழில்முறை நெறிஞர் அல்லது ஆய்வாளர் ஒரு உளவியலாளர் எனப்படுவர். உளவியலின் அடிப்படை ஆய்வு என்பது உள்ளுணர்வு, அறியும் ஆற்றல், கவனம், மன உணர்வு அல்லது உணர்ச்சி வேகம், இயல்புக்கம், மூளை செயல்பாடுகள், ஆளுமை, நடத்தை மற்றும் உள்ளார்ந்த தொடர்புகள் ஆகியவை தொடர்பான ஆய்வைக் குறிக்கும்

**மணிமேகலை**

மணிமேகலையின் காப்பியத் தலைவி மணிமேகலை கோவலன் மாதவியின் மகள் தன் தாயின் விருப்பத்திற்கு ஏற்ப பௌத்த சமயத் துறவியாக துறவறம் பூண்டவள் முற்பிறப்பின் வினையால் உதயகுமாரினிடம் தன் மனம் செல்வதைத் தடுக்க முயல்கிறாள் பிறகு தன் விருப்பப்படியே புத்தத்துறவியாகி மக்களின் பசியைப் போக்குவதையேத் தன் கடமையாகக் கொண்டு வாழ்ந்தாள் சிறைக்கோட்டத்தினை அறக்கோட்டமாக மாற்றியவள் இராசமாதேவி தன் மகன் இறப்பிற்கு மணிமேகலையே காரணம் என்று இழைத்தத் துன்பங்களை எல்லாம் பொறுமையுடன் தாங்கிக் கொண்ட தன்மையுடையவள் பிற சமயத்தை அறிந்து கொள்ள ஆர்வம் உடையவளாகவும் விளங்கினாள்



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**வைரமுத்துவின் இந்தப் பூக்கள் விற்பனைக்கல்ல கவிதையில் சமுதாயச்  
சிந்தனைகள்**

**முன்னுரை**

தமிழ் இலக்கியம் சங்கஇலக்கியம், அறஇலக்கியம், காப்பியஇலக்கியம், பக்திஇலக்கியம் என பலமுகங்களைக்கொண்டதுஆகும். இவற்றுள் இக்கால இலக்கியமும் ஒன்று. கவிதை, சிறுகதை, நாவல் முதலானவை இவ்வகையைச் சாரும். கவிதை படைப்பாளர்களுள் குறிப்பிடத்தக்கவர் கவிஞர்வைரமுத்து. இவரது படைப்புகளில் ஒன்றான 'இந்தப் பூக்கள் விற்பனைக்கல்ல' என்னும் நூலில் அமைந்த சமுதாயச் சிந்தனைகளை ஆராய்வதாக இக்கட்டுரை அமைகின்றது

**கவிதை**

கவிதை என்பது ஒரு கலையாகும். கவிஞர்தான் பெறும் அனுபவங்களைக் கற்பனைநயத்துடனும், கருத்துச்செறிவுடனும் ஒலிநயம், உணர்ச்சி, இனிமை, எளிமை ஆகியவற்றைக் கலந்து கவிதை வடிவங்களாகத் தருகின்றார். கவிதை குறித்துகவிமணி,

உள்ளத்துள்ளதுகவிதை - இன்பம்

உருவெடுப்பதுகவிதை

தெள்ளத்தெளிந்ததமிழில் - உண்மை

தெரிந்துரைப்பதுகவிதை (மலரும்மாலையும், ப.51)

என்றுகூறுகின்றார். கவிஞரின் கருத்திற்கேற்ப கவிதையின் பாடுபொருள் அமையும்.



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## GOTHIC ELEMENTS IN MARY SHELLEY'S NOVEL FRANKENSTEIN

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### ABSTRACT

The association between sci-fi and the Gothic has existed for almost 200 years, starting with the text likewise seen as the principal sci-fi novel, *Frankenstein*. This paper investigates the association between sci-fi stories and the Gothic through Mary Shelley's *Frankenstein* (1818). Gothic components incorporate dull settings, enduring of champion, and otherworldly events. In *Frankenstein*, Mary Shelley makes employments of settings, portrayal to utilize Gothic components all through the book. Mary Shelley utilizes nature as a quieting and therapeutic impact in Victor Frankenstein's life. Nature was a restorative cure that he searches out when he needs departure and recovery, while his family brings him solace; it was nature that was extreme reestablishing specialist. Frankenstein's dependence upon nature be that as it may, was a contention with his underlying cravings to control the regular condition and have impact and power over creation. *Frankenstein* was an extremely complicated novel which excites significant and indispensable issues of the failure of individuals assuming the liability of the maker. A heavenly occasion, weary feeling, orders *Frankenstein* as Gothic Novel.



A handwritten signature in green ink, appearing to be "D. S. S.", written over the printed name of the Principal.

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# Contemporaneity of English Language and Literature in the Robotized Millennium

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## Volume 3; Issue 3

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### A Thematic Study of Anita Desai's *Fire on the Mountain*

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\*Corresponding Author Email: [persis.julia@gmail.com](mailto:persis.julia@gmail.com)

**Abstract:** Man lives in close communion with nature and hence every change of mood in nature affects the mood of man also. Man's relationship with nature has been expressed beautifully in the poems of Wordsworth, Keats, Frost and Shakespeare. In the new age literary theory eco-criticism has found a prominent place which examines and explores the bond between nature and man in literature. Classics in literature like Shakespeare's plays and romantic age poetry are being re-read in this context and eco-critical perspectives gives a new dimension to the critique. This paper explores the Indian writer in English Anita Desai's novel *Fire on the Mountain* in an eco-critical perspective and examines the way Desai brilliantly manipulates nature imagery in her novel in the depiction of the alienation of her protagonist Nanda Kaul who lives alone in her house Carignano situated on the mountain ridge of Kasauli.

The matrix of *Fire on the Mountain* by Anita Desai deals with almost only women characters, Nanda Kaul, Raka and Illa Das are portrayed as figuring out in three different ambits of life that allow Desai the author to explore three different possibilities to the existentialist my statue of life. In doing so the novel skims over the efficiency of multi-perspective towards life that considers changes among characters.

**Key Words:** Withdrawal, Alienation, Indian Femininity

#### 1. Introduction

One of the themes of *Fire on the Mountain* is surely withdrawal, with its associated theme of loneliness, especially as embodied in Nanda and Raka. In Nanda's case the fixed results from a failed, if enduring, marriage, while in Raka's case the fixed is from domestic violence, for both, a man causes alienation. The violence of a predatory world cannot, however, be to get away, as Illa Das's fate so forcefully indicates. Nor is the retreat without its symbolic violence, which is played out in nature. As Nanda anticipates Raka's visit, she sees a white hen drag out a som until it snaps in two: "she felt like the worm herself, she winced at its mutilation, Nanda also sees herself as a predatory cat in pursuit of the lapwing, and later she sees the hoopoe bird feeding its young with insects. While Anita Desai tends to depict the ravine as blighted by civilization's waste and polluted by the smoke from the chimneys of the Pasteur Institute.

The Institute serves as an appropriate symbol for the antipodal nature of civilization or progress since it serves people through its production of serum, but at a cost: the smell of dogs brains boiled in vats, of guinea pigs guts of rabbits secreting fear in cages packed with coiled snakes, watched by doctors in white. Anita Desai does not however seem to be in a way that Involves thinking about things that happened in the past with happiness and also slightly feelings. The colonial past is also marked by violence, which the postman traces with black humor in his account of a Carignano corrugated roof blowing off, decapitating a coolie the pastor's wife attempts to poison him and then stab him; Miss Jane Shrewsbury pokes a fork into her cook's neck and he dies.

#### 2. Fire on the Mountain

In Anita Desai's fictional world, one simply cannot escape violence by difficult from e's obligations to others. Nanda's failure to connect with Illa Das and with Raka indirectly causes the former's death, and Raka's refusal to connect with her great-grandmother leads to her decision to destroy a world she can neither accept nor tolerate. All her novels have themes chiefly exploring the human psyche to its deepest depths. Anita Desai's exploration of female domains historically, the family and the home, as well as her focus on female characters and feminine



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# **Securing the Future: Enhancing Cloud Computing Security and Data Privacy for Big Data and Virtualization Infrastructure**

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## **Abstract**

Data-centric resources will eventually occupy a larger portion of the technology landscape. The cloud computing and big data infrastructures will need to be more secure. Recent technological advancements have shown how important data is to nearly controlling every facet of an organization's operations. Cloud computing has considerably improved the data, its privacy, and the execution of many Big Data applications. This essay discusses cloud computing's applications, security, and privacy in building a secure framework for big data architecture and virtualization. Security protocols for several linked Data Science domains is an exciting field of computer science research. Keywords—Big Data, Cloud Computing, Virtualization

## **1. Introduction**

Cloud computing, big data, and virtualization are the three data-driven platforms that have developed since the Internet's inception. They still hold a monopoly on the management, exchange, and preservation of data for numerous large-scale businesses as well as smaller ones. The terms "cloud computing" and "the cloud" refer to the availability, scalability, agility, and cooperation. It allows for cost savings achieved through effective and efficient computing [1]. The National Institute of Standards and Technology (NIST) has categorized the Cloud Computing environment into three services models, four deployment methods, and its basic characteristics [2]. An enterprise's reliance on the Cloud for its operations increases its susceptibility to security breaches and assaults. Big Data, as the name suggests is large amounts of data collected, processed and stored. The Big Data is classified based upon the four V's abbreviation. The four V's are: Volume, Velocity, Variety and Veracity [3]. Big Data analytics contain metadata and can be used to expose the privacy of an individual or any organization, security measures for the same need to be constructed. Infrastructure for virtualization and the related technologies are becoming quickly recognized in the market. The process of creating a virtual computer, or virtualization, results in the construction of two operating systems on one operating system. One Linux distribution that can be loaded on a virtual machine platform such as VMware [5] or Oracle Virtual Box [6] is Fedora [4]. This allows the Linux-based operating system to be used on a computer that is running Microsoft Windows. This paper's main goal is to raise awareness of the security measures that are currently in place for these information processing platforms and to propose some ideas that can be put into practice to further secure and protect the data while preserving its consistency and integrity.

## **SECURITY OF THE CLOUD**

"Cloud computing is a model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction," according to the National Institute of Standards and Technology (NIST) [7]. Cloud Platforms The Cloud Computing platform can be further categorized by the services it offers and the models on which it can be deployed [8], [9]

- *Infrastructure as a Service (IaaS)*

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## **Securing the Skies: Navigating Cloud Computing Landscape and Security Challenges**

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### **Abstract**

With the ability to rely on outside providers for data processing, storage, and public access, the cloud has emerged as a successful computing model for individuals and businesses. The components, service models, deployment methods, and security ideas of cloud computing are summarized in this survey. Numerous security concerns related to cloud computing are currently receiving a lot of attention. These concerns include identity management, data protection, network security, virtualization security, and application integrity. Although several methods are recommended for cloud computing data safety, there are still many unanswered questions. This paper provides an overview of the cloud computing framework and addresses security concerns about data processing, storage, and management.

**Keywords:** Cloud Computing, Virtualization, Cloud Security, Service Model, Deployment Model

### **1. Introduction**

A widely spread and varied observable fact is cloud computing. Large volumes of data can be stored by users on cloud storage platforms for later use. Access to dynamically provide virtualized IT resources at anytime, from any location. The machines do not have to be in the same physical place to participate in cloud computing. The process of managing, processing, and storing data via an internet-hosted system that includes distant servers as opposed to a local server or personal computer. The majority of cloud service providers save customer data in plaintext; if necessary, users must employ encryption techniques to protect their data. Every time the data is to be processed, it must be decrypted. The data is kept on the public cloud of Amazon Web Services (AWS) using DynamoDB. In a public cloud, user computing is done on encrypted data. Results can be downloaded to a client computer when needed. Users' data is never kept unencrypted on a public cloud in this situation. The US National Institute of Standards and Technology (NIST) defined cloud computing (Mell & Grance, 2011). A shared pool of reconfigurable computing resources (such as a network, servers, storage, applications, and services) that can be quickly provisioned and released with little management work or service provider interaction is what they define as cloud computing (Mell & Grance, 2009). A ground-breaking technique that is transforming enterprise software and hardware design and procurement is cloud computing. Cloud computing offers a plethora of advantages to its users, including free services, elastic resource allocation, internet-based accessibility, and more. Small and large businesses are adopting cloud computing to grow their clientele and form partnerships with other businesses. Prominent companies that have made investments in cloud computing include Google, Amazon, Cisco, IBM, Sun, Dell, and HP. They also offer a variety of cloud-based products to people and organizations. Regarding the many services offered, cloud computing comes in a variety of forms and models. Thus, cloud computing encompasses communal, hybrid, private, and public clouds. Two categories are typically used to categorize cloud computing: geographic location and service offerings. The following Figure. 1 shows a diagrammatic explanation of cloud computing (Khorshed, Ali, & Wasilmi, 2012):



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# **The Rise of Machine Learning in Computer Vision: Exploring Potential Applications and Implementation**

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## **Abstract**

In recent years, there has been a significant shift in computer applications from basic data processing to machine learning, primarily due to the abundance and accessibility of vast amounts of data gathered via sensors and the internet. The concept of machine learning illustrates and disseminates the knowledge that computers are capable of self-improvement over time. Through the hosting of conferences, workshops, group discussions, experimentation, and practical application, the western countries have demonstrated a strong interest in the fields of machine learning, computer vision, and pattern recognition. This research on computer vision and machine learning examines, assesses, and forecasts the potential uses of machine learning in computer vision. This research on computer vision and machine learning examines, assesses, and forecasts the potential uses of machine learning in computer vision. The study discovered that supervised, unsupervised, and semi-supervised machine learning techniques are used in computer vision. Neural networks, support vector machines, and k-means clustering are the algorithms that are frequently utilized. Object detection, object classification, and the extraction of pertinent data from pictures, graphic documents, and videos are the most recent uses of machine learning in computer vision. In addition, the Anaconda software development environment, Tensor flow, and Faster-RCNN-Inception-V2 model are used to identify cars and people in images.

**Keywords:** machine learning; image processing; object detection; computer vision; artificial intelligence; image classification; neural network; support vector machine.

## **1. Introduction**

The goal of computer vision and machine learning is to imbue computers with human abilities such as data sensing, data understanding, and decision-making based on historical and current results. Research in computer vision and machine learning is still developing [1]. Brain-human interfaces, the Industrial Internet of Things, and the Internet of Things all depend on computer vision. With computer vision and machine learning, complex human activities are detected and tracked in multimedia streams. Numerous tried-and-true techniques for analysis and prediction exist, including semi-supervised, unsupervised, and supervised learning. These techniques make use of machine learning algorithms like support vector machines and KNNs, among others. The three main components of machine learning solutions are data collection, model training, and prediction using the trained model. For text analysis, picture classification, and speech recognition, there are models and services offered by private businesses. Through application programming interfaces (API), one can make use of their models. As an example, consider IBM Watson, Microsoft Azure Cognitive Services, Polly, Lex, and Amazon Recognition. Analysing and detecting objects is a crucial aspect of daily existence. Applications for object detection include facial expression recognition, emotional recognition based on human postures, and preventing traffic collisions. developed an automated system in [2] that uses orientations to identify the information present in human faces in pictures and videos. The software libraries used in computer vision and object detection are TensorFlow and Open Pose. Numerous tried-and-true techniques for analysis and prediction exist, including semi-supervised, unsupervised, and supervised learning. These techniques make use of machine learning algorithms like support vector machines and KNNs, among others. One of the tasks convolution neural networks (CNNs) complete without information loss for successful object detection is zfeature extraction [5]. This research study aims to explore and critically assess machine learning applications in computer vision. Google Scholar was one of the databases that was searched, and advanced search methods were used to find results for the keywords "machine learning," "computer vision," "deep learning," and "artificial intelligence." There were 258 articles that included both patents and citations in the first search results. The total was reduced to 175 articles after looking through the articles' contents

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## **Unraveling Secure Storage Protocols for Public Auditability and Robust Data Integrity**

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### **Abstract**

Cloud computing is gaining huge popularity as an IT architecture. Cloud service providers offer many services based on cloud computing. A cloud storage service is a cloud service that can provide large-scale storage capacity to solve the storage capacity shortage of local end users. However, cloud storage services may provide data security because your data is not stored on its own storage. Service orientation, loose coupling, strong fault tolerance, business model, and ease of use are key characteristics of cloud computing. Although secure cloud storage has only recently been proposed, secure network coding has been researched for more than a decade. Secure cloud storage protocol for data storage with any secure network coding protocol. The first widely accepted secure cloud storage protocol in the standard model is this one. We thus base our data on public verifiability, which includes the derivation of basic requirements and arguments about security that are only heuristically argued in random Oracle models, or arguments that are not publicly verifiable. Verify earlier studies on consistency. Lastly, we assess the protocol's performance and suggest modifications and prototypes for the future.

**Keywords:** Service Oriented, loose couple, Authorized Users, Storage Cost, Cloud Computing

### **1. Introduction**

The internet has expanded recently, and one computing technology that has grown is cloud computing. It can supply resources to a user's computer or mobile device and share hardware and software resources. Because cloud computing can integrate resources, users can receive services that are more efficient. Consequently, cloud computing technology needs to meet five fundamental requirements: resource pooling, on-demand self-service, measured service, broad network access, and rapid elasticity (Mell & Grance, 2011). In order to create cloud environments and offer services to users, cloud service providers have teamed together. Three services are provided by cloud service providers: infrastructure as a service (IaaS), platform as a service (PaaS), and software as a service (SaaS). Renting cloud services is less expensive for users than building a cloud environment. The term "cloud computing" describes both the systems software in the data centers that provide those services as well as applications that are delivered as services over the internet. We refer to a cloud that is made pay-as-you-go accessible to the general public as a public cloud. Internal data centers of a company or other organization that are not accessible to the general public are referred to as private clouds. It is well known that SaaS benefits end users as well as service providers. Service providers gain from end users who can access the service at any time, from any location, share and collaborate more easily, and whose data is securely stored within the infrastructure; they also benefit from centralized control over versioning and greatly simplified software installation and maintenance. Three new features are introduced by cloud computing from a hardware stand point. • The illusion of limitless computing resources that are available instantly, so removing the need for cloud users to schedule ahead for provisioning. • The removal of an upfront commitment from cloud users, enabling businesses to start small and scale up their hardware resources only as needed. • The option to pay for the temporary use of computing resources as needed, encouraging conservation by disposing of equipment and storage when it is no longer needed. The following Figure1 shows the Users and providers of cloud computing:





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## Deep Learning-Based Movie Recommendations

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### Abstract

Especially in streaming services, recommendation systems play a critical role in item suggestions. Recommendation engines are vital for streaming video services like Netflix because they enable consumers to discover new films that they will like. In this research, we present a deep learning method based on autoencoders to generate a collaborative filtering system that anticipates user-submitted movie evaluations by utilizing a vast library of user ratings. We investigate the application of deep learning to predict users' ratings on new films, enabling movie recommendations, using the Movie Lens dataset. We contrast our deep learning method with two common collaborative filtering approaches, k-nearest-neighbor and matrix-factorization, to confirm its uniqueness and accuracy. The experimental results demonstrate that our recommendation system performs better than a user based neighborhood baseline in a survey where people evaluate recommendations from both systems and in terms of root mean squared error on anticipated ratings.

**Keywords:** collaborative filtering, deep learning, and movie suggestion

### 1. Introduction

Customers are using movie streaming services like Netflix, Hulu, Amazon Prime, and others more frequently to watch videos. For instance, over 140 million hours were watched daily by all Netflix subscribers in 2017, and the company made over \$11 billion in revenue that same year [5]. Approximately 80% of the hours streamed at Netflix were impacted by their in-house recommendation engine. The existence of movie streaming services has unquestionably become a necessary component of our modern video consumption habits, and the significance of movie recommendation algorithms is as important. In light of this, we suggest tackling the issue of collaborative filtering based on deep learning technique for movie suggestions. Recommendation engines play a critical role in assisting consumers of movie streaming services such as Netflix in finding new and entertaining material. Although much of the system's specifics are kept under wraps, we do know that it combines a number of distinct recommendation systems, including some methods that make use of cooperative filtering systems. Given this, we investigate the issue of collaborative filtering for movie recommendations. A recommendation system technique known as "collaborative filtering" uses both the individual user's ratings and the ratings of users who are similar to them. The core premise is that if we can anticipate movie ratings with any degree of accuracy, we should be able to suggest new films to consumers, including ones they might not have thought of previously. Consequently, collaborative filtering in the context of movie recommendation seeks to forecast unknown movie ratings for a specific user based on both the user's known ratings and the ratings of other users inside the system for that particular movie. When there are additional users who share the same preferences, collaborative filtering accounts for a wider range of tastes than content-based algorithms. By identifying comparable users, new goods can be suggested with the presumption that the user in question will enjoy items that similar people enjoy. Collaborative filtering can be done in a variety of ways, for example, by using user profiles and k-nearest neighbor clustering [2]. Many methods have been proposed for calculating similarity; however, a straightforward method is to utilize some measure of similarity (e.g., cosine similarity) between the vectors that constitute a user profile. Instead, using the theory that consumers who enjoy one item will also enjoy related items, the k-nearest-neighbor technique computes similarity between pairs of items [11]. Matrix factorization is another often used technique for collaborative filtering [8]. By using this method, a user-item matrix is factorized into two matrices, where some latent components are represented by the inner dimension. In order to recommend new items to users based on the latent factors, the resulting factorization reflects both users and items in terms of the latent factors. Deep

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# **Exploring the Frontiers of Computer Vision: A Journey through Image Processing, Object Recognition, and Machine Learning**

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## **Abstract**

Computer vision has been studied by many perspectives. It expands from raw data recording into techniques and ideas combining digital image processing, pattern recognition, machine learning and computer graphics. The extensive usage has attracted many scholars to integrate with many disciplines and fields. This paper provides a survey of the recent technologies and theoretical concept explaining the development of computer vision mainly related to image processing using different areas of their field application. Computer vision helps scholars to analyse images and video to obtain necessary information, understand information on events or descriptions, and beautiful pattern. It used the method of multi-range application domain with massive data analysis. This paper contributes to recent development on reviews related to computer vision, image processing, and their related studies. We categorized the computer vision mainstream into four group, e.g., image processing, object recognition, and machine learning. We also provide brief explanation on the up-to-date information about the techniques and their performance.

**Keywords** – Computer vision, Image processing, Digital image

## **1. Introduction**

Computer vision has been expanded into the vast area of field ranging from recording raw data into the extraction of image pattern and information interpretation [1]. It has a combination of concepts, techniques, and ideas from digital image processing, pattern recognition, artificial intelligence and computer graphics [2]. Most of the tasks in computer vision are related to the process of obtaining information on events or descriptions, from input scenes (digital images) and feature extraction. The methods used to solve problems in computer vision depend on the application domain and the nature of the data being analyzed. Computer vision is a combination of image processing and pattern cognition [2],[3]. The output of the Computer Vision process is image understanding. Development of this field is done by adapting the ability of human vision in taking information. Computer Vision is the discipline of extracting information from images, as opposed to Computer Graphics [4]. The development of computer vision depends on the computer technology system, whether about image quality improvement or image recognition. There is an overlap with Image Processing on basic techniques, and some authors use both terms interchangeably [4],[5]. The primary purpose of Computer Vision is to create models and data extracts and information from images, while Image Processing is about implementing computational transformations for images, such as sharpening, contrast, among others [4]. It also has similar meaning and sometimes overlapping with In Human and Computer Interaction (HCI)[6]. HCI coverage focus on full design, interface and all aspects of technologies related to the interaction between human and computer. HCI is then developed as a separate discipline (which is the field of interdisciplinary science) which discusses the interrelationships between human-computer mediated by technology development including human aspects. Functionally, computer vision and human vision are the same [7], with the aim of interpreting spatial data, i.e., data indexed by more than one dimension. However, computer vision cannot be expected to replicate just like the human eye [8]. This is due to computer vision system has limited performance and function compared to the human eye. Even though many scholars have proposed broad area of computer vision techniques to replicate human eye, however, in many cases, there is any limitations of the performance of computer vision system [9]. One of the significant challenges in their technique is the sensitivity of the parameters, the strength of the algorithm, and the accuracy of the results. It impact on the complexity of performance evaluation of computer vision systems. Generally, the performance evaluation involves measuring some of the basic behaviors of an algorithm to achieve accuracy, strength, or extensibility to control and monitor system performance. As the performance of computer vision system depends

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## **Enhancing Communication and Reliability in AI Systems with Explainable Artificial Intelligence (XAI)**

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### **Abstract**

The revolutionary concept of Explainable Artificial Intelligence (XAI) tackles the increasing demand for accountability, transparency, and comprehension in AI systems. In a time when artificial intelligence permeates many facets of our lives, XAI has become a crucial tool for improving AI's interpretability and usability for users and stakeholders. This book examines the main ideas, advantages, methods, and difficulties related to XAI. In order to give comprehensible insights into AI decisions, XAI techniques like feature importance ranking, local explanations, rule-based models, visual explanations, and counterfactual explanations serve as fundamental tools. These methods assist users in understanding the reasoning behind AI results, whether in banking, healthcare, autonomous vehicles, or other important fields. By doing this, XAI reduces potential biases and inaccuracies and fosters confidence in AI systems. main ideas, advantages, methods, and difficulties related to XAI. Nevertheless, there are certain difficulties with XAI adoption. Addressing potential security and privacy risks, guaranteeing that users fully understand explanations, and striking a balance between transparency and complexity are some issues that need to be resolved. To fully reap the benefits of XAI while reducing related dangers, organizations need to make investments in user education and clear communication. In this situation, XAI is responsible for transforming the field of AI and bringing about the development of systems that can rationalize their choices for people. The way we engage with, trust in, and depend on artificial intelligence could be completely changed by the continuous developments in XAI research and its use in a variety of industries.

**Keywords:** AI Transparency, Explainable Artificial Intelligence (XAI), Ethical AI, User Trust, XAI Applications transforming

### **1. Introduction**

In recent years, artificial intelligence (AI) has advanced remarkably, sectors and improving decision-making. But as AI systems are incorporated more and more into our daily lives, concerns about their accountability, transparency, and interpretability are becoming more pressing. The discipline of Explainable Artificial Intelligence (XAI) is a novel area of study and research that aims to allay these worries and offer a way to comprehend, trust, and use AI technology efficiently. The ability to illuminate the "black box" aspect of many AI systems in which intricate algorithms and neural networks generate judgments that appear puzzling to humans is the fundamental component of XAI. The opaqueness of AI decisions, whether in the context of financial models assessing creditworthiness, autonomous cars making split-second decisions, or medical AI detecting illnesses, can be uncomfortable and raise concerns about biases, mistakes, and unforeseen consequences. This investigation of Explainable Artificial Intelligence explores its underlying theories, methods, uses, and related benefits and drawbacks. XAI is affecting a wide range of industries, including healthcare, banking, autonomous cars, and LegalTech. It is changing how we use and interact with AI. Understanding XAI is essential for anybody hoping to utilize AI's potential while preserving transparency and control, as well as for developers and researchers pushing the field forward. This thorough analysis will serve as a guide to XAI's significance, techniques, and ramifications in our AI-driven world as it continues to develop and impact the AI landscape.



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## **Unlocking Insights: A Comprehensive Study on Big Data Analytics Tools, Techniques and Challenges**

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### **Abstract**

It is challenging to handle data that is complicated in terms of amount, variety, velocity, and/or relationship to other data using conventional database administration or techniques. Analytical methods used to sets of data categorized as "big data" are referred to as big data analytics. Every organization in the world is currently dealing with an unheard-of increase of data. By the end of 2012, it was predicted that the digital universe of data would have grown to 2.7 zettabytes (ZB). Then, every two years, it is expected to treble, reaching 8 ZB of data by 2015. Such a large amount of data. Big Data, to put it briefly, is the process of swiftly obtaining business value from a variety of novel and developing data sources, such as location data produced by smartphones and other mobile devices, social media data, publicly accessible online information, and data from sensors integrated into vehicles, buildings, and other objects. Here, I cover the fundamentals of big data analytics as well as its tools, approaches, and technical difficulties.

**Keywords:** Analytics, Big data, Hadoop, Mapreduce, NoSQL.

### **1. Introduction**

The definition of analytics, according to the Oxford Dictionary, is "information resulting from the systematic analysis of data or statistics" or "the systematic computational analysis of data or statistics." Since information is the foundation of knowledge and wisdom, analytics is crucial to many various areas of study and business, particularly in the area of decision-making. For instance, the procurement department of a chain of supermarkets would struggle to choose what to buy and in what quantities without analytics. Rapid data storage is not a novel concept. The ability to swiftly and affordably do something significant with that data is what's new. For many years, governments and businesses have been holding enormous volumes of data. Currently, nevertheless, there is a veritable boom of novel methods for deciphering those massive amounts of data. We are witnessing a proliferation of new technologies that are intended to handle complex, non-traditional data, specifically the kinds of unstructured or semi-structured data generated by social media, mobile communications, customer service records, warranties, census reports, sensors, and web logs, in addition to new capabilities for handling large amounts of data. Traditional business data and tools are frequently the first stop on the journey, providing insights into anything from inventory levels to sales predictions. Typically, SQL-based business intelligence (BI) tools are used to analyse data that is kept in a data warehouse. An OLTP database was initially used to record business transactions, which provide up a large portion of the data in the warehouse. The bulk of BI use cases involve reports and dashboards, but an increasing number of businesses are using multi-dimensional databases for "what-if" research, particularly when it comes to financial planning and forecasting [1]. Big data can help these planning and forecasting applications, but in order to achieve this, organisations need to use sophisticated analytics. Companies have typically migrated the data to dedicated servers for analysis when doing more complex data analysis, such as statistical analysis, data mining, predictive analytics, and text mining. It takes time to export data from the data warehouse, duplicate it to external analytical systems, and derive insights and forecasts. Specialised data analysis abilities and redundant data storage environments are also necessary. Customised BI tasks and conventional data sources are being augmented by new forms of data. Weblog files, for instance, track website

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# IoT-Based Smart Health Monitoring System

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### Abstract

The primary purpose of the Internet of Things-based Smart Healthcare Monitoring System (SHS) is to provide emergency medical assistance. It can show how to integrate flexible IoT data interoperability with medical implementation. It provides patients in intensive care units (ICUs) with effective assistance for emergency medical services. The doctor can quickly install the Blynk app on their phones and gain access by using it. This system performs well and responds quickly, yielding effective and efficient results. By gathering, evaluating, and disseminating a vast amount of data in real-time, the smart healthcare system improves health-related issues and lowers healthcare costs. The primary motivation is to lessen the burden on physicians who must visit patients frequently to assess their physical state. SHS helps both patients and doctors save time. The temperature, drip level, and heartbeat sensors' accurate and useful results are provided by this real-time medical service.

**Keywords:** Smart Healthcare Monitoring, IoT, Blynk application, Heartbeat sensor, Temperature sensor, Drip level sensor.

### 1. Introduction

The wireless network of devices that are linked to one another to exchange data and information is known as the Internet of Things, or IOT. It will use the network to gather and distribute vital data. It will be easier to record and analyze it using SHS for later use. The utilization of multiple sensors and actuators to perceive different parameters of the patient's body and ward is made possible by the Internet of Things. The cloud serves as a communication route between the PC unit and the Blynk app, allowing access to patient information. It is an open-source Internet service that engages with people. In addition to being sturdy and cozy, this connects everyone on the planet. A key component of smart healthcare systems is the Internet of Things. The primary goal is to lessen the burden on doctors to see patients regularly.

**Related works:** [1] Businesses that make consumer goods have started developing methods for giving their items IP (internet protocol) control. A sizeable portion of the lines of multinational electronics companies are being marked by technologies such as RF ID, which is the IP network's front end. The primary function of the home automation systems already in place is to enable control over all integrated equipment from a single central unit. The suggested fixes based on this concept are quite costly and challenging to set up. The main requirement for IP-based systems is proximity to a direct internet connection, which should make them easier to access and control. In light of this, SHS has created an affordable hardware/software framework centred on a device known as the IPAC Box, which enables direct internet connection access and management of residential and industrial automation systems straight out of the box, even in dynamic IP settings. In [2], Using an INTEL GALILEO 2ND generation development board, the design and implementation of an IOT-aware architecture for a smart healthcare system for emergency medical services that can demonstrate the flexible collection, integration, and interoperability of IoT data and support emergency medical services like intensive care units (ICU) [9]. The suggested methodology gathers, records, analyses, and shares massive data streams effectively and in real-time, allowing users to save healthcare expenses and improve health-related risks. The concept was born out of a desire to lessen the burden of patients needing to see a doctor each time they needed their blood pressure, heart rate, temperature, etc. checked. This concept allows doctors to aid as much as possible in emergencies while also saving time for both patients and doctors. [6] By connecting and gathering data through health status monitors—which would include the patient's heart rate, blood pressure, and ECG—and sending an emergency alert to the

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# **Exploring the Termite Algorithm: A Novel Adaptive Routing Technique for Efficient Communication in Mobile Ad Hoc Networks**

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## **Abstract**

A self-configuring network of mobile devices connected by wireless links is known as a mobile ad hoc network (MANET), sometimes known as a mobile mesh network. Ad Hoc Networks are not dependent on any established infrastructure, in contrast to Traditional Mobile Wireless Networks. Due to their complex nature and constant communication connectivity, studies on a variety of issues pertaining to mobile ad hoc networks are growing in popularity. In this study, a method for determining the path between nodes in a MANET is discussed. A new packet routing technique for communication networks is called Termite. Adaptive, distributed, and mobile agent-based algorithm Termite was motivated by the ant colony concept recently developed. This technique creates paths between pairs of nodes using a number of mobile agents sometimes known as artificial termites. The agents explore the network concurrently and exchange information to update the routing tables. Packet delays and throughput are two metrics that are used to evaluate its performance. When compared to previous algorithms, the algorithm's results demonstrate higher throughput. Thus, the termite algorithm is a promising choice for data routing in business networks.

**Keywords:** Mobile agents, Pheromone, Routing algorithm, Swarm intelligence and Termite.

## **1. Introduction**

A self-configuring network of mobile hosts connected by wireless links is known as a mobile ad hoc network, and the network's topology is formed by their unification [1]. Convenience, mobility, productivity, deployment, and expandability are the benefits of ad hoc networks. The network topology fluctuates randomly as the nodes in the network change. Therefore, creating a spawn path between two nodes is challenging. This algorithm is distributed, adaptive, and swarm intelligence-inspired. Swarm intelligence (SI) encompasses the class of optimising algorithms known as ant algorithms [2][3]. Ants, which are network exploration agents, communicate to perform routing in the ant algorithm [4][5]. This approach builds a path between pairs of nodes by having a number of mobile agents update routing tables and exchange information.

## **2. Review of the Literature**

Destination-sequenced distance vector routing, wireless routing protocol, ad hoc on-demand distance vector routing, and dynamic source routing protocol are a few of the routing algorithms used in ad hoc networks [6][7]. When compared to previous algorithms, the algorithm proposed in this research differs in the following ways:

- Because the aforementioned algorithms must send their routing tables to other nodes throughout the network, they all incur a significant overhead. They either move them using an event-based approach or a time-based one. Since the network does not require the transmission of routing tables, the termite does not present this issue.
- Because some of the algorithms in use today do not support numerous paths, load balancing is not possible in the event that the ideal path is extremely congested.
- In the event that the ideal path becomes clogged, the termite algorithm facilitates load balancing in addition to generating multiple paths. Special packets are also needed for the above methods in order to maintain the route. This is not the case with the termite algorithm, which is more scalable and stable than



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## எட்டுத் தொகை அகநூல்களில் அறம்

பு.எழிலரசி

செயின்ட் ஜோசப் மகளிர் கலை மற்றும் அறிவியல் கல்லூரி ஓசூர் - 635 126

**முன்னுரை:** பண்டையத் தமிழர் 'நாகரீகத்தின், சிறந்த சிந்தனையின் ஊற்றாகவும் விளங்குவது சங்க இலக்கியங்களே. அத்தகைய சங்க இலக்கியங்களை மூன்றாகப் பகுத்தனர் நம் முன்னோர்கள், எட்டுத்தொகை, பத்துப்பாட்டு,பதினெண்கீழ்கணக்கு. இவற்றில் முன்னிரண்டும் சங்க காலத்தது, மற்றொன்று சங்கம் மருவிய காலத்தது.

‘கல் தோன்றி மண்தோன்றா காலத்தே வாளொடு

முன் தோன்றியது நம் மூத்தத் தமிழ்குடி’

என்னும் கூற்றிலிருந்து நம் தமிழ் மொழியானது பல ஆயிரம் ஆண்டுகளுக்கு முன்னரே தோன்றியிருத்தல் வேண்டும். பண்டைக்காலத்தில் வாழ்ந்த தமிழர்கள் சாதி மத பேதமின்றி வாழ்ந்தனர் என்பதற்கு அடையாளம், அவர்கள் அகம் புறம் என்று பிரித்துக் கொண்டு ஆங்காங்கே குழுக்களாக வாழ்ந்து வந்தனர். அதன் பின் தாங்கள் வாழ்ந்து வந்த இடங்களை ஐந்திணைகளாகப் பகுத்துக் கொண்டு வாழ்ந்தனர். திணை என்றால் எழுக்கம் என்பது பொருள். அதற்கேற்ப சங்கத் தமிழர்கள் புறவொழுக்கத்தோடு அக வொழுக்கத்தையும் கடைபிடித்து ‘ஒருவனுக்கு ஒருத்தி’ என்னும் பண்பாடு மாறாமல் வாழ்ந்து வந்தனர். அத்தகைய அறவொழுக்கத்தினைப் பற்றி ஆராய்வதே இக்கட்டுரையின் நோக்கமாகும்.

### நற்றிணையில் அறம்

தலைவி தலைவனிடத்து குறையே கண்டாலும், அக்குறையை வெளிப்படையாகக் கூறாமல் நயமாக தோழியிடம் கூறுகிறாள்.

“பகல் எரி சுடரின் மேனி சாயவும்,  
பாம்பு ஊர் மதியின் நுதல் ஒளி கரப்பவும்  
எனக்கு நீ உரையாயாயினை: நினக்கு யான்  
உயிர் பகுத்தனன் மாண்பினன் ஆகலின்”<sup>1</sup>

குறிஞ்சித் திணையில் தோழிக்கு தலைவி அறத்தோடு நின்றல்; என்னும் துறையில் அமைந்துள்ளது இப்பாடல். பாங்கியற் கூட்டத்தில் தலைமகளின் குறையைத் தீர்ப்பதற்கு தோழி முற்படுகின்றாள். ஆதலால் அவள் தலைவியிடம் ‘நின் மேனி வாடிற்று: நெற்றி ஒளி குன்றிற்று ஆனால் அவற்றின் காரணத்தை நீ உரைக்கவில்லை. ஆயினும் நான் அதை அறிவேன் என்கிறாள். அதற்குத் தலைவி அதற்காக நீ வருத்தப்படாதே திணைப்புனத்தில் தலைவன் என் முதுகை அணைத்தான் அதனால் அவ்வாறு இருக்கிறேன் என்று தோழியிடம் நயமாகக் கூறி தன் ஒழுக்கம் குன்றாதவாறு அறத்தோடு நிற்கின்றாள்.

தலைவன் பரத்தையிற் பிரிந்து சென்றாலும் தலைவியின் மேல் கொண்ட காதலால் தலைவியிடம் சேர நினைக்கின்றான். அப்பொழுது தலைவி ஏற்றுக் கொள்ள மாட்டாளோ என்று பயந்து விருந்தினனை வீட்டிற்கு அழைத்து வருகின்றான்.

“தடமருப்பு எருமை மடநடைக் குழவி  
தூண் தொறும் யாத்த கான் தகு நல் இல்,  
கொடுங்குழைப் பெய்த செழுஞ்செய் பேழை  
சிறுதாழ் குழை பெய்த மெல் விரல் சேப்ப”<sup>2</sup>

தன் கைகள் சிவக்க தலைவி அட்டில் சமைக்கிறாள். தலைவன் விருந்தொடு வருகின்றான். தலைவன் மீது இருக்கும் கோபத்தை விருந்தினர் முன் காட்டிக் கூடாது பதிலளிமை: ராமச்சந்திர கல்வி மற்றும் விளையாட்டு அறக்கட்டளை பதிப்பகம்

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## தமிழ் இலக்கியங்கள் கூறும் அறச்சிந்தனைகள்

சி.ஹேமலதா

செயின்ட் ஜோசப் மகளிர் கலை மற்றும் அறிவியல் கல்லூரி ஒருர் - 635 126

ஆய்வுச்சுருக்கம்: தமிழில் நீதியை உணர்த்துமாறு அகப்புறத் திணை இலக்கியங்களிலேயே, அடிப்படைக் கூறுகள் அமைந்து கிடந்தன. சிற்சில துறைகள் நீதி இலக்கிய வளர்ச்சிக்கு வித்திட்டன. 'திருக்குறள்' அக்காலத்துப் பெருநூலான உலகிற்கு வெளிப் போந்தது. பதினெண் கீழ்க்கணக்கிலுள்ள நீதி நூல்கள் தொடர்ந்து ஏற்பட்ட வளர்ச்சி நிலையாகும். தமிழில் சங்க காலத்துக்குப் பின்வந்த இதனை நீதி நூல் காலம் என்றே குறிப்பிடுகின்றோம். திருக்குறளுக்கு அடுத்து, 'நாலடியாரும்' உடன் வைத்து எண்ணப்படும் சிறப்புடையதாயிற்று. தமிழில் நீதி இலக்கிய வகை தனக்கென்று ஒரு தனி வளர்ச்சி வரலாறும், இயல்பும், நோக்கமும் உடையதாயிற்று.

### அறநூல் காலம்

பொதுவாகச் சங்கம் மருவிய காலத்தில் தான் மிகுதியான நீதி நூல்கள் தோன்றின. கி.பி. மூன்றாம் நூற்றாண்டு முதல் ஆறாம் நூற்றாண்டு வரை களப்பிரர் இடையீடு காரணமாக மூவேந்தர் ஆட்சி கி.பி. மூன்றாம் நூற்றாண்டிற்கு பிறகு விழ்ச்சியடையத் தொடங்கியது. களப்பிரருக்கும் உள் நாட்டு மன்னருக்கும் போரும் பூசலுமாக இருந்ததால் தமிழ் இலக்கிய கலை, பண்பாடு யாவும் சிதைவுற்றன. தேறல் பருகி புலால் உண்டு இன்ப வாழ்வில் திளைத்த பழைய வாழ்க்கையை விடுத்துச் சமண, பௌத்த மத செல்வாக்கால் பல்வேறு நோன்பு வாழ்க்கை மேற்கொள்ளப்பட்டது. நீதி இலக்கியம் பல்கிப் பெருக அதுவே காரணமாகும். எனவே இந்த காலக் கட்டத்தை அறநூல் காலம் என்று கூறுவர்.

இவ்வாறாக அறநூல்கள் பல தமிழில் காலந்தோறும் தோன்றி வந்துள்ளன. அவைகளின் வகைகள்::

1. சங்கம் மருவிய கால நீதிநூல்கள்
2. கி.பி. பன்னிரண்டாம் நூற்றாண்டில் வாழ்ந்த ஒளவையார் பாடி அளித்த நீதி நூல்கள்
3. இடைக் காலத்தில் தோன்றிய நீதிநூல்கள்

பதிப்புரிமை: ராமச்சந்திர கல்வி மற்றும் விளையாட்டு அறக்கட்டளை பதிப்பகம்



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மலர் 2, இதழ் 2, 2021  
ராமச்சந்திர கல்வி மற்றும் விளையாட்டு அறக்கட்டளை பதிப்பகம்  
பன்னாட்டுத் தரப்புத்தக எண் : 9788194845959  
இணையதளம்: <http://restpublisher.com/book-series/ctll/>

## சங்ககாலத்தில் மருத்துவ கலை

ஈ.கவிதா

செயின்ட் ஜோசப் மகளிர் கலை மற்றும் அறிவியல் கல்லூரி ஓசூர் - 635 126

முன்னுரை : பழம்பெருமை வாய்ந்த நாடு நம் பாரத நாடு . எல்லா வளங்களும் இசெல்வங்களும் சிறப்பாக பெற்ற நம் நாட்டில் அரசியல் , பொருளாதாரம், கல்வி, வாணிகம், மருத்துவம் போன்ற துறைகளில் ஏற்றமும், பெருமிதமும் பெற்று திகழ்கிறது. சங்ககாலத்தில் மக்கள் மகிழ்வோடு, நல்ல பழக்க வழக்கத்தோடும், முறையான வாழ்க்கை சிறப்பாகவும் உணவு முறைகளை சீராகக் கொண்டும் வாழ்ந்து வந்துள்ளனர் . தாங்கள் தங்கள் உடல் நிலையை காத்துக் கொள்ள விளையாட்டுகள், தவ வலிமைகள், கட்டுப்பாடுகள் இவாழ்க்கைக்கு எதுவோ, அதனை கொண்டு சிறப்பாக விளங்கினர்.

உடல்நலம் காப்பதில் அதிக அக்கறை உடையவர்களாக இருந்தனர் . எதுவும் வந்த பிறகு கவலைப்படுவதை காட்டிலும்இ வருவதற்கு முன்னமே அதை தீர்ப்பதற்கான உணவு முறைகளை கையாண்டனர் . எவ்வளவு கவனமாக இருந்தாலும், நோய் என்பது இவர்களுக்கு தான் வரும் என்று குறிப்பிட்டு சொல்ல முடியாது . யாரை வேண்டுமென்றாலும் நோய் அண்டும். நோய்க்கு ஏழை, பணக்காரன் என்று தெரியாது. ஆனால் பாதிக்கப்பட்டவர்களுக்கு தான் கட்டாயம், அதிலிருந்து எப்படியாவது வெளி வந்து சீக்கிரம், சாதாரண வாழ்க்கை வாழ வேண்டுமே என்று ஆசையும் ஆவலமாக இருப்பார்கள் .

அதற்காக, அவர்கள் தேடுவது ஒரு பரிகாரம் ; என்ன செய்வது இயாரை பார்ப்பது, எங்கே போவது என்ற ஒரு கேள்விக்குறி அவர்களிடம் எழும்பும் . அப்படி தேடுவதில் அவர்களுக்கு கிடைக்கும் நிறைவே" மருத்துவம் "அக்காலத்தில் எல்லா துறைகளையும் கையாள்வதில் கைவந்தவர்களாக இருந்தனர் நம் முன்னோர்கள் . அதேப்போலவே, மருத்துவத் துறையிலும் சிறப்பான இடத்தை வகித்தனர் . எந்தவித தவறுகள் இல்லாமல் முறையான மருத்துவம் செய்து சாதனை படைத்துள்ளனர் . இக்காலத்தில் தீர்க்க முடியாத உயிர்கொல்லி நோய்களை, சங்க காலத்தில் வாழ்ந்த வைத்தியர்கள் மிக எளிதாக அருகாமையில் கிடைக்கக்கூடிய மூலிகைகள், வேர்கள் மர பட்டைகள் கொண்டு சிறப்பான முறையில் மருத்துவம் செய்து பெரும் வெற்றி அடைந்துள்ளனர் . அம்ருத்துவமுறை மக்களின் நோயை போக்குவதோடு மட்டுமல்லாது, அவர்களின் உள்நோயை தீர்க்கும் அருமருந்தாய் அமைந்துள்ளது.

பதிப்புரிமை: ராமச்சந்திர கல்வி மற்றும் விளையாட்டு அறக்கட்டளை பதிப்பகம்



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மலர் 2, இதழ் 2, 2021  
ராமச்சந்திர கல்வி மற்றும் விளையாட்டு அறக்கட்டளை பதிப்பகம்  
பன்னாட்டுத் தரப்புத்தக எண் : 9788194845959  
இணையதளம்: <http://restpublisher.com/book-series/ctl/>

## சங்க இலக்கியங்கள் கூறும் வணிகத்தின் சிறப்பம்சம்

ந.கனிமொழி

செயின்ட் ஜோசப் மகளிர் கலை மற்றும் அறிவியல் கல்லூரி ஒசூர் - 635 126

ஆய்வுச்சுருக்கம்

“அருளில்லார்க்கு அவ்வுலகம் இல்லை யாகியாங்கு  
பொருளில்லார்க்கு இவ்வுலகம் இல்லை”

என்ற குறளின் வரிகளுக்கேற்ப இவ்வுலகில் மனித வாழ்வு சிறப்பாக நடைப்பெற பொருள் அவசியம். ஆகவே, “திரைக்கடலோடியும் திரவியம் தேடு” என்ற பழமொழிக்கேற்ப திரவியம் தேட மனிதன் ஆரம்பித்தான். ஒரு நாட்டின் வளர்ச்சியைத் தீர்மானம் செய்வது அந்நாட்டின் கண்களெனப் போற்றப்படும் தொழிகளான விவசாயம். மற்றொன்று விளைவித்த பொருளைச் சந்தைப்படுத்துவது. அதாவது வணிகம். அப்படிப்பட்ட இவ்வணிகமே ஒரு நாட்டைப் பொருளாதார அளவில் முன்னேற்றப்பாதைக்கு கொண்டுச் செல்லும். ஏனெனில் ஒரு நாட்டின் முன்னேற்றமே தனிமனித முன்னேற்றமாகும். ஆகவே இதற்கு காரணமாக இருக்கக் கூடிய வணிகம் தற்காலத்தில் மட்டுமல்ல சங்ககாலத்திலும் எவ்வாறு இருந்தது என்பதைக் குறித்து விளக்குவதே இக்கட்டுரையின் நோக்கம்.

முன்னுரை

வாணிகம் செய்வார்க்கு வாணிகம் பேணிப்  
பிறவும் தமபோற் செயின் (குறள்.120)

பிறர் பொருளையும் தன் பொருள் போல் எண்ணிக் கொடுக்கல் வாங்கல் செய்வதே சிறந்த வாணிபம் என்று திருக்குறள் கூறுகிறது. வணிகத்தின் மொழியாக ஆங்கிலம் திகழ்கிறது. பண்டைய தமிழகத்தின் பொருளாதாரம் உழைப்பை உயர்வாகக் கொண்டது. பொருளாதார வாழ்க்கை நிலைக்கேற்ப தொழில் செய்து, உழைத்து உற்பத்தியைப் பெருக்கினர். தன்னிறைவுடன் வாழ்ந்து, செல்வத்தைப் பெருக்கினர். வணிக மூலங்கள் பெருகின அதன் மூலம் வணிகமும் பெருக்கெடுத்தது.

வணிகம் தொழிலுக்குக் கவர்ச்சியளித்தது. கைவினைஞர்களுக்குத் தொழில்வாய்ப்பும், வளமும் ஏற்படுத்தியது. உள்நாட்டு வணிகர்களும் வெளியிடத்து வணிகர்களும் தமிழகத்தில் தொழிலில் ஈடுபட்டிருந்தனர். மகத, யவன நாட்டினர், தமிழகத்துத் தொழில் பிரிவுகளில் ஈடுபட்டிருந்தனர் என்று நற்றிணை போன்ற இலக்கியங்கள் வாயிலாக அறியலாம்.

வாணிகம்

உற்பத்தி, தேவைக்கு மிஞ்சும் போது பண்டத்தை மாற்றும் நிலை உருவாகின்றது. சங்க காலத்தில் தமிழ் மன்னர்கள் நாணயம் அச்சிட்டிருந்ததும், பதிப்புரிமை: ராமச்சந்திர கல்வி மற்றும் விளையாட்டு அறக்கட்டளை பதிப்பகம்



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மலர் 2, இதழ் 2, 2021  
ராமச்சந்திர கல்வி மற்றும் விளையாட்டு அறக்கட்டளை பதிப்பகம்  
பன்னாட்டுத் தரப்புத்தக எண் : 9788194845959  
இணையதளம்: <http://restpublisher.com/book-series/ctl/>

## மேகலைகாட்டும் மனோதிடம்

**பெ.சங்குவதி**

செயின்ட் ஜோசப் மகளிர் கலை மற்றும் அறிவியல் கல்லூரி ஓசூர் - 635 126

**முன்னுரை:** இலக்கியம் மக்களின் வாழ்க்கை பிரதிபலிக்கும் காலக் கண்ணாடியாகும். இலக்கியத்தில் வரும் மாந்தர்கள் உளவியல் அடிப்படையில் படைக்கப்பட்டன. தமிழ் இலக்கியங்கள் மெய்பாடுகளுக்கு முக்கியத்துவம் அளிக்கப்பட்டுள்ளன. வாழ்க்கைக்கு அடிப்படையான உளவியல் சிந்தைகளை இலக்கிய மாந்தர்கள் மூலம் அறிய முடிகின்றன. மனிதனின் ஒவ்வொரு செயலுக்கும் உந்துதலாக இருப்பது அவனுடைய உள்ளமே. அத்தகைய உள்ளத்தைப் பற்றி பல உளவியல் அறிஞர்கள் ஆராய்ந்திருக்கின்றார்கள். அவ்வகையில் குறிப்பிடத்தக்கவர் சிக்கமண்ட் பிராய்டு ஆவார். உளவியல் அடிப்படையாகக் கொண்டு மணிமேகலைக் காப்பியத்தை அணுகுவது கட்டுரையின் நோக்கமாகும்.

### உளவியல் அல்லது மனோதத்துவம்

உளவியல் என்பது மனதின் செயல்பாடுகள் மற்றும் நடத்தைகளை அறிவியல் முறையில் ஆய்வு செய்யும் கற்கை மற்றும் பயன்பாட்டு ஒழுங்கு முறையாகும். இந்தத் துறையின் தொழில்முறை நெறிஞர் அல்லது ஆய்வாளர் ஒரு உளவியலாளர் எனப்படுவர். உளவியலின் அடிப்படை ஆய்வு என்பது உள்ளுணர்வு, அறியும் ஆற்றல், கவனம், மன உணர்வு அல்லது உணர்ச்சி வேகம், இயல்புக்கம், மூளை செயல்பாடுகள், ஆளுமை, நடத்தை மற்றும் உள்ளார்ந்த தொடர்புகள் ஆகியவை தொடர்பான ஆய்வைக் குறிக்கும்.

### மணிமேகலை

மணிமேகலையின் காப்பியத் தலைவி மணிமேகலை கோவலன் மாதவியின் மகள் தன் தாயின் விருப்பத்திற்கு ஏற்ப பௌத்த சமயத் துறவியாக துறவறம் பூண்டவள் முற்பிறப்பின் வினையால் உதயகுமாரினிடம் தன் மனம் செல்வதைத் தடுக்க முயல்கிறாள் பிறகு தன் விருப்பப்படியே புத்தத்துறவியாகி மக்களின் பசியைப் போக்குவதையேத் தன் கடமையாகக் கொண்டு வாழ்ந்தாள் சிறைக்கோட்டத்தினை அறக்கோட்டமாக மாற்றியவள் இராசமாதேவி தன் மகன் இறப்பிற்கு மணிமேகலையே காரணம் என்று இழைத்தத் துன்பங்களை எல்லாம் பொறுமையுடன் தாங்கிக் கொண்ட தன்மையுடையவள் பிற சமயத்தை அறிந்து கொள்ள ஆர்வம் உடையவளாகவும் விளங்கினாள்.

### உருவ ஆளுமை

மணிமேகலை அழகும் இளமையும் வாய்ந்தவள் தான் பிறந்தது கணிகையர் குலம் என்றாலும், அதை மாற்றி உயிர்களின் சிறந்த பண்பு அன்பு செலுத்துதல் என்பதை கடமையாகக் கொண்டு வாழ்ந்தவள் மாதவியும் மணிமேகலையை மரபு வழியான கலையில் ஈடுபடுத்தாமல் அன்பில் அறத்தில் திளைக்கக்கூடிய மாண்புடையவளாக

பதிப்புரிமை: ராமச்சந்திர கல்வி மற்றும் விளையாட்டு அறக்கட்டளை பதிப்பகம்



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## எட்டுத்தொகையில் மருத்துவச் செய்திகள்

சே.கீதா

செயின்ட் ஜோசப் மகளிர் கலை மற்றும் அறிவியல் கல்லூரி ஓசூர் - 635 126

முன்னுரை: மனிதன் அறிவியல் துறையில் முன்னேறியுள்ள இன்றையக் காலகட்டத்தில் இயற்கையிலிருந்து விலகியே வாழ்வதால் நோய்கள் பெருகிக் காணப்படுகின்றன. மருத்துவக் கண்டுபிடிப்புகள் பல மனிதனின் ஆயுட்காலத்தைச் சிறிது நீட்டிக்கின்றன. இன்றைய கண்டுபிடிப்புகளின் அடித்தளம் நம் தமிழ் இலக்கியங்களில் காணப்படுகின்றன. சங்க இலக்கியங்கள் முதல் தற்கால இலக்கியங்கள் வரையுள்ள அனைத்து இலக்கியங்களிலும் உடல்நலத்தைப் பேணக்கூடிய மருத்துவச் செய்திகள் பொதிந்து கிடக்கின்றன. தமிழ் இலக்கியமானது, ஆரோக்கியமான வாழ்விற்கு வழிகாட்டும் மருத்துவத்தின் மகத்துவத்தினை நமக்குப் போதிக்கிறது. இங்கு, எட்டுத்தொகையில் காணப்படும் மருத்துவச் செய்திகள் ஆராயப்படுகிறது.

### மருத்துவர் - குறிப்பு

'நோவு, நோதல்' போன்ற சொற்கள் நோயைக் குறிக்கின்றன. நோயை அறிந்து குணப்படுத்துபவரை 'மருத்துவர்' என்று அழைக்கிறோம். நோயுற்றோரின் உடல்நிலையை அறிந்து, அதற்குத் தகுந்தாற் போல பழங்காலத் தமிழ் மருத்துவர்கள் மருந்து கொடுக்கின்றனர். இதனை,

"பொருந்தியன் வேட்ட பொருளவின் நினைத்த சொல்  
திருந்திய யாக்கையுடன் மருத்துவன் ஊட்டிய  
மருந்து" (கலி.17)  
என்ற கலித்தொகைப்பாடல் எடுத்துரைக்கிறது.

அறத்தொழில் செய்யும் மருத்துவரை 'அறவோன்' என்று குறிப்பிட்டனர்.

"அரும்பிணி உறுநர்க்கு வேட்டவை கொடாஅது  
மருந்து ஆய்ந்து கொடுக்கும் அறவோன்" (நற்.136)  
இங்கு நோயினை அறிந்து, அதற்கேற்ற மருந்து கொடுத்த மருத்துவர்களை 'அறவோன்' என்று கூறிய செய்தி புலப்படுகிறது.

"பிறர் நோயும் தம்நோய் போல் போற்றி அறன்அறிதல்  
சான்றவர்க்கு எல்லாம் கடன்" (கலி.22)

இவ்வரிகளில் நோயாளிக்குச் சிகிச்சையளிக்கும் மருத்துவர், தன்னையே

பதிப்புரிமை: ராமச்சந்திர கல்வி மற்றும் விளையாட்டு அறக்கட்டளை பதிப்பகம்



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# **CONGLOMERATION OF ENGLISH LITERATURE AND LANGUAGE**



**EDITORS**

**Mrs.K.P. BAKHYA SEEMA | Dr. RITUSHREE SENGUPTA**

**Dr. K. KAVIARASU | Dr.K. MANJU KUMARI**





# PATRASAYER MAHAVIDYALAYA

(A degree College of Arts Affiliated to Bankura University)

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**Dr. SANTOSH KONER**

*Principal*

## *Principal's Message*

The collective venture of Patrasayer Mahavidyalaya (Affiliated to Bankura University), West Bengal, N.M.S. Sermathai Vasan College for Women, Madurai, Tamil Nadu and BODHI Journal has been truly splendid. The Two Day International Congress that was organised on 26<sup>th</sup> and 27<sup>th</sup> December, 2020 brought together academicians from all over the world and celebrated the real spirit of knowledge. Now that the presentations are being developed into a book, I can only re-affirm my faith in such diverse collaborations that displays the nationwide progress which multidisciplinary studies are ensuring.

Literature mirrors human life and contributes in transforming the societies at large. Amidst the pandemic, I have personally realised that it is the solid academic interest of academicians and students that have kept the body of knowledge updated with every passing day. Literature has the ability to provide us with newer and clearer perspectives every day which is much needed for the uninterrupted progress of human world.

I am much pleased to see the fabulous areas of research interest that this congress has taken into account and I am earnestly looking forward to the brilliant outcome of this collaboration that to my belief will not only oblige the pursuit of knowledge but also make its future brighter.

I wish to thank all the contributors, the Editors and of course every single person whose labour has gone into the making of the book.

Regards,



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## CHAPTER 33

# GENDER STEREOTYPES IN KAVERY NAMBISAN'S MANGO-COLOURED FISH

**L. JENNIFFER**

Ph.D. Research Scholar & Assistant Professor  
St. Joseph's College of Arts and Science for Women,  
Hosur, Tamil Nadu

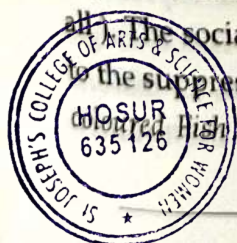
### Abstract

Exposing the social structures of gender in novels, the writers condemn domineering persona and emphasize one's rights. The prevailing gender inequality in a society leads to a lot of discussions and ideologies demanding social integration. Kavery Nambisan, a South Asian Writer explores substantial perspectives through her varied characterization and their bigotry. She exposes how men and women move on with the challenges and obstacles amidst the gender discriminated society. The author predominantly focuses on the suppression of the mind affected by external situations. The article also explores the gender differences in emotion with culture as its base. The male and the female emotions to a particular situation carry different viewpoints predominated by the cultural values and conservative traits of a particular community. *Mango-coloured Fish* is a novel of sensitive emotions, prejudices, expectations, disappointments, confusions and problems. The emotional expressions are biased and thus feminist psychology strives for an egalitarian society to break gender stereotypes. Nambisan depicts the stress and depression the characters go through when the masculine traits offend the feminine emotions. Though the characters are juggled by varied emotions in their journey they establish their identity by being emotionally intelligent.

**Keywords:** Gender, emotions, bigotry, culture, psychology, women rights

Kavery Nambisan, a surgeon cum novelist hails from Kodagu, a place of prestigious culture. Nambisan's writing is greatly influenced by Thoreau and Gandhi as she found them uncomplicated and candid. Hailing from the land of aromatic coffee plantations, the writer says that her novels are induced by the sap sweet fragrance of her childhood memories. Her works posed her as a pragmatist and an idealist. Her authentic novels are the melange of realism and imagination. She discovered a writer within herself when she wanted to take a break from her routine work.

The gender attributes in society differ according to their embedded cultural values. The social structure of any community includes the relationship of one group to another, the ratio of individual disposition to social behavioural patterns and the traditional setup of the society. The culture establishes the power between the masculine and feminine gender. "Empirical evidence suggests that girls are socialised to be emotional, non-aggressive, nurturing, and obedient, whereas boys are socialized to be unemotional, aggressive, achievement-oriented and self-reliant" (Wester et al). The social phenomenon determines the psychological changes the individuals go through due to the suppression and prejudices of the family, community and society as a whole. Her novel *Mango-coloured Fish* (1998) is scrutiny of societal traditions, identity and expectations before and after the





## About the Editors



**Mrs. K.P. BAKHYA SEEMA**, Associate Professor and Head, Department of English of MAAS Sermathai Vasan College for women, Madurai, Tamil Nadu leaving the track record of more than twenty years of expertise in the status of professor in the College. Besides her tight academic and admin schedule she is successfully pursuing her Ph.D in Alagappa University. She has to her credit of publishing more than fifteen thematic papers in National and International Seminars and Conferences. Proudly to mention, out of the educational events, the two National and International seminars convened by her in the college, under the theme of "Trends in Alternative Literature" and "Role of Literature in the upliftment of Society: - Need of

New Perspectives" are remarkably outstanding with educational credit and subject value. Pertinent to mention that she is a real academic asset to the institution with peers' acceptance and admirations basing her empirical genuineness and generosity to empower her students and followers with appreciable and loyal leadership qualities.



**Dr. RITUSHREE SENGUPTA** is an Assistant Professor of English in Patrasayer Mahavidyalaya (Affiliated to Bankura University). She completed her M.A from Visva Bharati, securing the First Rank in 2014. She was an exchange program student in Yunnan University, China and had been awarded a fully funded research residency in London in 2018. She has published research papers in several national and international journals of repute. She is a brilliant singer of rabindrasangeet and also a published poet.



**Dr. K. KAVIARASU**, Assistant Professor, Department of English, Vivekananda College, Kanniyakumari, India has put in fifteen years of teaching and research experience. He is specialized in Ecocriticism, Postmodern theories, Post-colonial Literature, English Language Teaching, and Life Skills. He has organized twelve Conferences and has been resource person in various academic platforms in India and Abroad. He has also participated in numerous Workshops, Conferences, Symposium and Training Programmes. He has published three score of research articles in books and journal volumes; served as Editor of ROOTS

International Journal, and reviewer and Editorial board member in various peer-reviewed International

Journals. Being an ardent lover of nature, he was conferred "Green Ambassador" by Heber Au Sable Institute of Environmental Studies and was bestowed with "Best Researcher Award" thrice. He is a life member of Indian Association for the Study of Australia, Australia- India Interdisciplinary Research Network, EcoEthics International Union - Germany, and Secretary of South Asian English Language and Literature Teachers Association.



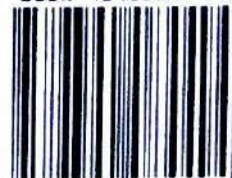
**Dr. MANJU KUMARI.K**, Head & Assistant Professor in English(SF) works at Nirmala College for Women, Coimbatore, Tamilnadu. Madam is aSelf-directed, enthusiastic facilitator with a passionate commitment to student development, she is determined to be punctual and honest in herTeaching career. She is Specialized in the fields of Indian Writing in English and Native American Literature. Madam has been awarded the Shri PK Das Memorial BEST FACULTY AWARD 2018 –ENGLISH (Junior Category) andEXCELLENCE TEACHING IN HIGHER EDUCATION AWARD Organised by DK International Research Foundation, Perambalur,Tamilnadu in connection (ICRTASET). She has strong experience in Research

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**S. Bhuvaneswari**



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## CREATION OF GOD

All God's creation is Nature, God gave us all for our future  
Those birds that fly in the sky, those mountains which are high.

Trees are green whereas the sea water is clean  
How delightful is the rain, as clouds are moving like train  
Here it is and there it goes, everywhere the wind blows  
Summer's beautiful sunshine, and now everything is mine.

*-P. Prathima Shree M.A M.phil*





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# *Enchanting Nature*

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