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# IJARIIT

# SPECTRUM

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Spectrum is an e-magazine with the comprehensive collection of all the papers that have been published in our journal over the last two months — Volume 8, Issue 1 (January-February, 2022). This edition brings together 107 papers by 292 authors from 109 institutions. Each entry links to the abstract and the full paper.

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# ABSTRACTS

## 1 Correlational tendencies between Goods and Services Tax and financial markets in India

Paper ID V8I1-1142 · Pages 1-3 · Financial Markets

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This paper is aimed at finding a correlation, if any, between Goods and Services Tax (GST) collection announcements and financial markets, specifically, the National Stock Exchange in India. The authors hypothesize that news of GST collection data affects investor confidence and thus the stock market. The result is evident from the correlation between the index of companies with the highest MCap and GST, especially in the financial year 2021.

**Keywords:** GST, Stock Markets, Nifty Indices, Correlation, Investor Confidence, Data Analysis, Bivariate analysis

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## 2 Machine learning for 5G technology

Paper ID V8I1-1137 · Pages 4-7 · Computer Engineering

**Patel Niharkumar Kantibhai**, Assistant Professor, Asian BCA College, Himatnagar, Gujarat
**Patel Nirmalkumar Shankarbhai**, Assistant Professor, Oneway Akshar Technology LLP, Himatnagar, Gujarat
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The deployment of 4G / LTE mobile networks has solved the big challenge of creating high-capacity mobile real broadband internet. This was made possible mainly by the strong physical level and the flexible network architecture. In addition, there is a strong demand for high reliability and almost zero latency of mobile networks with other new services. Such as vehicle communication or vehicle internet. 5G has overcome some of these challenges. In addition, the adoption of software defense networks and the virtualization of network functions have added greater flexibility to operators, allowing operators to support high-demand services from a variety of vertical markets. It is also necessary to predict its evolution in order to create a network that can be actively and effectively (self-measuring). This chapter explains the role of artificial intelligence and machine learning in creating cost-effective and relevant next-generation mobile networks in 5G and later mobile networks. Some of the practical applications of AI / ML in the network life cycle are discussed.

**Keywords:** 5G Technology, LTE Mobile, AI, ML, Machine learning

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## 3 Socio-economic characteristics of the Sugarcane growers in the Balrampur district of Uttar Pradesh

Paper ID V8I1-1155 · Pages 8-10 · Agricultural Extension

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**Dipak Kumar Bose**, Associate Professor, Sam Higginbottom University of Agriculture, Technology, and Sciences, Prayagraj, Uttar Pradesh

Sugarcane (Saccharum officinarum) is primarily grown for its juice, which is used to make sugar. The vast majority of the world's sugarcane is grown in subtropical and tropical climates. Sugarcane is a well-established source of sugar and the current first-generation feedstock benchmark for efficient biofuel production. The current study was carried out to assess the socioeconomic characteristics of sugarcane growers in the Balrampur District, which was selected purposively. The study was carried out in selected villages of Tulsipur Tehseel in the Balrampur district of Uttar Pradesh. The samples consisted of 316 respondents who were selected through a proportionate random sampling method. The respondents were interviewed personally and data were collected through a pre-structured and pre-tested interview schedule. The study revealed that the majority of the respondents (51.58%) had middle age group, most of the respondents were illiterate (62.78%), They engaged Agriculture farming as a primary occupation and had operational landholding size up to 1 ha with income levels ranging from 75000/- it was also revealed that most of the respondents occasionally participate in social participation, 67.08 percent of the sugarcane growers had a medium level of participation in extension program, whereas 33.86 and 44.30 percent of them had a medium and low level of innovativeness respectively. It was also found that 58.86 percent of the respondents had medium cosmopolites. Respondents are interested in more information and try out new ideas and technologies within their budget and limits and also farmers who are prone to innovations will try to gather information regarding the new technology from various aspects, they wanted to learn new ways of farming, improved production technologies and want to adopt those technologies at a faster rate with maximum accuracy.

**Keywords:** Sugarcane Growers, Socio-Economic Status, Psychological Characteristics

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## 4 Finger dorsal pattern

Paper ID V8I1-1148 · Pages 11-12 · Electronics & Telecommunication

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This paper investigates a new approach for personal authentication using finger dorsal pattern imaging. The texture pattern produced by the finger knuckle bending is highly unique and makes the surface a distinctive biometric identifier. The finger geometry features can be simultaneously acquired from the same image at the same time and integrated to further improve the user-identification accuracy of such a system. The finger-back surface images from each user are normalized to minimize the scale, translation, and rotational variations inthe knuckle images. This paper details the development of such an approach using peg-free imaging. The experimental results from the proposed approach are promising and confirm the usefulness of such anapproach for personal authentication.

**Keywords:** Finger Dorsal Biometrics, Knuckle Segmentation, Finger Knuckle Biometrics, Major Finger Knuckle, Finger Knuckle, Biometrics Fusion

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## 5 Cognitive ability among LD and normal adolescents

Paper ID V8I1-1145 · Pages 13-15 · Social Science

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**Jerus Albert Britto J**, Lecturer, Pg and Research Department of Psychology, Government Arts College,Coimbatore

In psychology, cognitive ability refers to aptitude for carrying out mental processes, such as problem-solving, adaptation, comprehension, reasoning, knowledge acquisition, abstract thought, and making connections. In education, cognitive ability is considered a foundation for learning. Learning Disabilities" refers to a variety of disorders that affect the acquisition, retention, understanding, organization, or use of verbal and/or non-verbal information. These disorders result from impairments in one or more psychological processes related to learning, in combination with otherwise average abilities essential for thinking and reasoning. Learning disabilities are specific, not global impairments, and as such are distinct from intellectual disabilities. Hence a study is conducted in order to find out the cognitive ability among LD and normal adolescents.

**Keywords:** Cognitive Ability, LD

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## 6 Oral care practices in intensive care unit patients- A critical issue

Paper ID V8I1-1136 · Pages 16-23 · Dentistry

**Uzma Irshad**, Student, Rajiv Gandhi University of Health Sciences, Bengaluru, Karnataka
**Sushama R. Galgali**, Professor, Rajiv Gandhi University of Health Sciences, Bengaluru, Karnataka

Background: Critically ill patients, who may be unconscious or sedated while they are treated in ICUs, often need the assistance from machines to help them breathe (ventilators). The use of these machines for more than 48 hours may result in ventilator-associated pneumonia (VAP). Oral hygiene care, using a mouth rinse, gel, toothbrush, or combination, together with suctioning secretions, may reduce the risk of VAP in these patients. There are recommendations and guidelines for oral care in the ICU administered to patients in the 2005 AACN Procedure Manual for Critical Care and the guidelines from the Centers for Disease Control and Prevention respectively. However, no gold standard exists for oral care for critically ill patients who are orally

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intubated. Objective and method: A descriptive study using a self-administered 25 questionnaire was used to describe oral care practices performed by 100 nurses posted in ICU. Results: 84% of the respondents reported oral care practices as a high priority in ICU-administered patients. 63% of nurses provided oral care twice a day for an average duration of 20-40 seconds. The most common tool used were spatulas and gauge (30%); toothbrush (16%); spatulas, gauge, toothbrush and suctioning (14%) followed by spatulas, gauge, and suctioning (10%) with the least used being swabs and foams (2%). 83% of the responders also mentioned the use of chemical plaque control, 6% uses toothpaste, 50% used 0.12% chlorhexidine and 25% used toothpaste and chlorhexidine. Conclusion: There is a gap in actual practices compared with policies because of the variations among different organization policies.

**Keywords:** HAP, VAP, Nosocomial Infection, Oral Care Practices, AACN

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## 7 Smart pothole detection system using crowd sourcing

Paper ID V8I1-1144 · Pages 24-28 · Electronics Device

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Roadways are the primary mode of transportation in our daily lives. As such it is very important to be cautious about potential mishaps due to road damages which can have serious consequences. Thus for traffic safety, it becomes very important to identify the various road damages, especially the hazardous ones, as quickly as possible. In this project, we are proposing our idea on how a road damage identifier system can work to detect the damages.

**Keywords:** Accident, Potholes, Ultrasonic Proximity Sensor, Arduino

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## 8 Door lock using Arduino motion detector by PIR sensor

Paper ID V8I1-1138 · Pages 29-33 · Arduiono Uno

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This project is mainly for the security purpose of any door, it may be for doors for normal houses, or it can be for any other kind of door. But it is better for normal house doors as another type of door has many other higher lock systems and that are better for that purpose. But house door locks are too easy and too basic to open nowadays, for which the robbery and theft are increasing this much, so as a solution it can help us to protect our home

**Keywords:** To Increase the Security of Normal House Doors, Pir Sensor, and Arduino

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## 9 Design & construction of Dyke walls in a petrochemical tank farm

Paper ID V8I1-1158 · Pages 34-37 · Civil Engineering

**H. M. Viswanatha Sastry**, Bhamys Constructions Private Limited, Mysuru, Karnataka

This technical paper shows how a dyke wall is designed and built in a Petrochemical complex. Petrochemical complexes contain tanks which store various combustible and inflammable materials like Benzene, Toluene, Xylene, and similar type of petrochemicals. The tank farm contains vertical and horizontal tanks to store the above-said materials and is constructed with plain cement concrete (500 mm thick) dyke wall around these tanks for the long life of the structures. Dyke walls of varying heights are constructed. In this study different types of dyke walls constructed based on the locally available materials are shown. The dyke walls are of various types/sizes, keeping in view the fire load aspects and distance from critical operations, area of effectiveness, ease of workmanship in construction, and cost-effectiveness. In this case study, dyke walls have been constructed using locally available materials/bricks and CC blocks. The extract of photos has been obtained from the public domain and has been used within the paper for demonstration.

**Keywords:** Storage, Chemicals, Inflammable Selection, Fire Load, Safety, Durability, Time, Cost.

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## 10 Niosome as a versatile drug carrier

Paper ID V8I1-1147 · Pages 38-44 · Pharmacy

**Shipra Tripathi**, Research Scholar, School of Pharmaceutical Science, Chhatrapati Shahu Ji Maharaj University, Kanpur, Uttar Pradesh
**Ahmed Obaidullah**, Research Scholar, School of Pharmaceutical Science, Chhatrapati Shahu Ji Maharaj University, Kanpur, Uttar Pradesh
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In recent years, numerous research articles have been published relating to the potential of niosomes to serve as a biodegradable, biocompatible carrier for the delivery of various types of drugs. Niosomes are vesicles that are mostly composed of synthetic surfactants and cholesterol. The vesicular system of niosomes, with its bilayer structure assembled by nonionic surfactants, can increase the bioavailability of a drug to a specific area for a set period of time. Niosomes' amphiphilic nature enhances their ability to encapsulate lipophilic or hydrophilic drugs. Other additives, such as cholesterol, can be used to keep the structure of the niosomes rigid. The efficient use can be defined as a lower dose, fewer side effects, fewer dosages, greater patient compliance, and maximum concentration of the drug at the site of action to reduce unnecessary exposure to the entire body. This narrative review discusses the fundamentals of niosomes, such as their structural components and methods

**Keywords:** Niosome, Compositions, Methods of Preparation, Encapsulation, Surfactants, Vesicles, Application

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## 11 Experimental investigation on concrete with partial replacement of fine aggregate by date and tamarind seed

Paper ID V8I1-1163 · Pages 45-52 · Concrete

**Sarathkumar.S.C**, Assistant Professor, Velalar College of Engineering and Technology, Erode, Tamil Nadu
**Karthik.C**, Assistant Professor, Velalar College of Engineering and Technology, Erode, Tamil Nadu
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Reusing Agro product waste by utilizing them into building materials is a moderate solution to achieve a sustainable environment. Date Seed (DS) and Tamarind Seed (TS) are lightweight when compare with another concrete ingredients. It reduces the self-weight of the structure. This Study reports that study on mechanical properties of the utilization of date and tamarind seed as a partial replacement for fine aggregate. They are washed, dried, and grained to make medium sand size. The mixes were prepared by weight basis of 10 % to 20 % of date seed and 1.5 % to 2.5 % of tamarind seed for M sand in M25 grade concrete mixes. For each mix, the standard size of cubes, cylinders, and prisms as per Indian standard was cast and tested to assess the mechanical properties such as compressive, split tensile and flexural strength. The results of this investigation indicated that the replacement of 10% of DS and 1.5% of TS with fine aggregates achieve closer to the strength of Control Concrete (CC) and further replacement shall reduce the concrete strength.

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**Keywords:** Agro Product Waste, Date Seed, Tamarind Seed, Compressive Strength, Tensile Strength

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## 12 The present and future trends of cybercrimes

Paper ID V8I1-1151 · Pages 53-59 · Information Technology-cyber Security

**Ravichandran Ramasamy**, Research Scholar, Livingstone International University of Tourism Excellence and Business Management, Lusaka, Zambia

There have been many challenges today amongst the organizations and the governments to achieve a more secure digital environment. The recent pandemic has paved the way to cyber criminals to a unique opportunity to penetrate human defenses. The present-day cyberattacks become highly sophisticated and much more dangerous. Data leakage continues to be a significant threat by working remotely, the cost of defending the breaches has risen to a new high. The present-day cyber-attacks show not just data theft, they are acting in a catastrophic manner by intruding into the essential infrastructures like hospitals, gas pipelines, electricity, and water supply leading to serious physical harm. Tessian cybercrime statistics says, “Google has registered 2,145,013 phishing sites as of January 17, 2021. This is up from 1,690,000 on January 19, 2020. (27% increase in a year). Ransomware is prevalent in 2021. Data exfiltration is now a big part of the game with what is called double extortion ransomware. Trend Micro alone detected 34% more new ransomware families in 2021than last year”. Apart from the present-day cybercrimes, newer forms of cyber threats are evolving every day. Cyber threat statistics show that there are many emerging threats like Ransomware attacks using data exfiltration, Cryptojacking, Mobile spyware, IoT-focused cybercrimes, 5 G-based intrusion, Stalkerware, irreparable malware attacks, and State-sponsored Cyberactivism. As technology is growing at a rapid pace, present-day cyber criminals make use of every technological development for their criminal activities. The purpose of this article is to understand the modalities of present forms of cybercrimes and the evolution of new cybercrime trends of the near future.

**Keywords:** Cybercrime, Cyberstalking, Denial of Service, DDoS, Cyber Defamation, Cyber Fraud, IPR Violation, Web Jacking, Crypto Jacking, Ransomware, Cyber Activism, Phishing, Data Exfiltration, Artificial Intelligence & IoT attacks.

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## 13 Understanding the impact of Biodiversity on human beings due to climatic changes.

Paper ID V8I1-1166 · Pages 60-62 · Zoology

**Dr. Sandeep Shukla**, Associate Professor, Dayanand Brajendra Swarup College, Kanpur, Uttar Pradesh

Our survival is largely dependent on the diversity of flora and fauna, any loss is no longer merely an environmental concern it is also a financial one. Biodiversity loss affects not only our health but also the climate. Species and ecosystems are vanishing at an alarming rate. Biodiversity continues to dwindle at an alarming rate, putting the planet's ability to provide goods and services in jeopardy. The present extinction rate is predicted to be 1000 times faster than the natural extinction rate. However, we may be approaching a new period marked by the sixth global mass extinction of species that will be the first to be created by humans. if

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present loss rates continue, by 2050, an area of 1.3 billion hectares- almost 1.5 times the size of the United States - would have lost all of its natural biodiversity. Climate change is exacerbating this unparalleled loss of biodiversity. Climate change may cause the extinction of more than 30% of all known species by the end of the century. The effect and repercussions of our planet's unparalleled loss of ability to continue delivering goods and services that we humans take for granted are unclear to the general public and policymakers. We must all take responsibility for our actions. We must confront the difficulties posed by the biodiversity loss catastrophe as a group. Fresh initiatives and a new perspective are required. Every country and every person of the world must band together to defend life on the planet. 2010 has been designated as the International Year of Biodiversity by the United Nations. The year 2010 is a celebration of life on Earth and the importance of biodiversity in our lives, with the goal of involving people from all over the globe in the struggle to safeguard life on Earth and allowing us to take the necessary actions to stop the erosion of our natural foundations.

**Keywords:** Extinction, Biodiversity, Climate, Species, Genetic, Ecosystem, Survival, Habitats, Flora and Fauna, Grassland, Deserts, Desertification

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## 14 Potential analysis of new energy with emphasis on sustainable

Paper ID V8I1-1154 · Pages 63-70 · Sustainable Energy

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Given that fossil energy sources are scarce and their excessive use makes the environment vulnerable, their use as a fuel is unreasonable. In recent years, urban planners have been designing low-energy cities such as Masdar in the UAE. In a city like Tehran that is plagued by a variety of environmental problems, optimizing energy consumption in urban areas is a necessity. The purpose of this study was to evaluate the potential of renewable energy type In District 4 of Tehran and its applicability in different sectors to achieve sustainability. The research method is applied-developmental. The information is based on the documentation and field method. According to experts, the main variables of the research are considered three dimensions of solar, wind, and geothermal energy. The data were collected by a questionnaire from a sample of 76 statistical experts. In the areas of functionality and productivity of each type of energy, the statistical analysis of PLS and in order to investigate the potential evaluation of feasible zones, in three main dimensions with 21 zones, T-test statistical model was used. Since Tehran's District 4 is large and has a variety of uses, Considering the results of the research, it is appropriate to start equipping specific land use(military, forestry, parks, industrial areas, etc.) to develop renewable energies as a first step. At the same time, the municipality, as the most important developer of this type of energy, along with the Renewable Energy Organization, should develop this part of the energy in public spaces such as passageways and so on.

**Keywords:** Renewable Energy, Sustainable Development, District 4 of Tehran, Urban Areas

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## 15 Intelligent traffic light control system

Paper ID V8I1-1167 · Pages 71-74 · Electronics And Communication Engineering

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**Rupam Saha**, Student, Narula Institute of Technology, Kolkata, West Bengal
**Manish Kumar Pandit**, Student, Budge Budge Institute of Technology, Kolkata, West Bengal
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Traffic congestion is a serious problem in many cities around the world so it is time to switch to more manual mode or timer-timer mode to a more automated decision-making system. The current traffic signals system is based on a fixed time which may cause malfunction if one route works better than the other. To address this issue we have developed a smart traffic management system framework. Sometimes high traffic congestion on one side of the junction requires a longer green time compared to the allotted time. Therefore, we suggest here the way in which the time of green light and red light is allocated on the basis of existing traffic congestion. at that time. This is achieved by using an ultrasonic sensor. When the density is calculated, the bright time of the green light is allocated with the help of a microcontroller (Arduino). Sensors located on the side of the road will detect the presence of vehicles and send information to the microcontroller where it will determine how long the flank will be open or when to switch on signal lights. In the following sections, we have described in detail the process of this framework.

**Keywords:** Accident, Traffic Signal, Traffic Congestion, Ultrasonic Sensor, Arduino, Microcontroller, Intelligent Traffic Control System

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## 16 Observation on CFD Analysis of ZnO and TiO2 Nanofluid with Oil and Ethylene Glycol in Square and Helical Coil Heat Exchanger

Paper ID V8I1-1174 · Pages 75-83 · Thermal Engineering

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**Vijaykant Pandey**, Assistant Professor, Bhabha Engineering Research Institute, Bhopal, Madhya Pradesh

The study of this investigation is the comparison of CFD Analysis of ZnO & TiO2 Nano-Fluid with Oil and Ethylene Glycol as a base fluid in Tapered Helical Coil Heat Exchanger with the help of CFD on the copper tube. The Zinc Oxide(ZnO) & Titanium Oxide (TiO2), are used as Nanofluid and water and ethylene glycol is a base fluid. Tapered Helical coil was fabricated by bending 500 mm length of a copper tube having 10mm tube diameter, 50mm pitch coil diameter, 20mm pitch and Square shaped coil was fabricated by bending 500 mm length of a copper tube having 10mm square side, 50mm pitch coil dia, 20 mm pitch. The comparison of pressure drop and temperature variation between ZnO & TiO2 nanofluid with oil as its base and ZnO & TiO2 nanofluid with ethylene glycol as its base is found in this analysis. The result indicates that the ZnO nanofluid with oil as a base fluid has maximum pressure drop and also has maximum temperature variation compared with other nanofluid and base fluid as a base fluid. A computational fluid dynamics (CFD) methodology using ANSYS FLUENT 15 is used here to investigate pressure drop of Zinc Oxide (ZnO) & Titanium Oxide (TiO2) nanofluid with ethylene glycol and water as its base fluid on the heat transfer characteristics in a tapered

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helically coil-tube.

**Keywords:** Helical Coil, Square Shaped Helical coil, Nano-fluid, Heat Exchanger, CFD, Pressure Drop, Temperature Distribution

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## 17 Experimental setup of micro wind turbine

Paper ID V8I1-1181 · Pages 84-93 · Sustainable Energy

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**Ajay Kale**, Associate Professor, Vishwakarma Institute of Information Technology, Pune, Maharashtra
**Shreyas Joshi**, Student, Vishwakarma Institute of Information Technology, Pune, Maharashtra
**Piyush Butala**, Student, Vishwakarma Institute of Information Technology, Pune, Maharashtra
**Devashish Game**, Student, Vishwakarma Institute of Information Technology, Pune, Maharashtra

The exhaustion of fossil fuels, spreading global warming, the higher need for energy, and the lack of power supplies lead to the use of renewable sources of energy like wind energy. Although there is abundant wind energy available in many regions in our country, the application of wind turbines to harness power efficiently is very limited. The primary objective of this project is to study the fabrication of windmills, study and analyze the results, and to use them in various applications like automobiles, top story buildings, coastal areas, and boats. Also to analyze the output generation on different environmental conditions like wind speed, air density, etc. Simulation, theoretical and experimental methods will be used. In experimental methods, direct results will be analyzed from the experimental setup of the turbine. In simulated methods software like Ansys will be used to calculate the fluid flow, structural data, etc. And in the theoretical method calculation of the expected power will be done using theoretical formulas. The research also focuses on a selection of wind turbines and the selection of their components like generators, material selection, etc. For that, a market survey is important to minimize the cost and increase the effectiveness of the wind turbine. The market survey can be done in two types offline market surveys like visiting local shops and industries and online market surveys which can be done using Google, Amazon, etc. The expected outcome is to generate power of range 50-100 W. For this research blades with different materials were used to test the effectiveness of the turbine. Along with that different types of motors were used as a generator for testing. Power of a minimum of 10 W and a maximum of 50 W was produced. This research also focused on the cost-effectiveness of the turbine. It was manufactured in 6000 INR.

**Keywords:** Windmill, Applications, Wind Turbine, Generator, Rotor Blades, Sustainable Energy, Renewable Energy, Renewable Resources

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## 18 An empirical study of zoology’s effect on biophysics

Paper ID V8I1-1183 · Pages 94-97 · Biophysics

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**R. T. Pattar**, Assistant Professor and Head Department of Physics, B.L.D.E.A’s Commerce, B.H.S Arts and T.G.P Science College, Jamakhandi, Bagalkot, Karnataka

Ancient cultures regarded animal studies as a lux. Drs Avicenna and Averroes improved our grasp of human physiology, which frequently had zoological implications. Zoological biologists have benefited from linkages with other fields like chemistry, physics, and data science. Behavioral Ecology is a branch of ecology that integrates zoology and animal behavior. Physical anthropology tries to answer when anatomically modern humans diverged from the closest monkey relatives. Bionics create artificial systems inspired by nature, such as robotics, prosthetics, and space travel.

**Keywords:** Biophysics, Physics, Zoology

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## 19 Alternate materials for bottom components and solutions for foot problems

Paper ID V8I1-1178 · Pages 98-124 · Designing

**Anshika Dutt**, Student, Footwear Design and Development Institue, Hyderabad, Telangana

this is a thesis on the alternate material that can be used instead of leather soles and more solutions provided for not problems

**Keywords:** Foot Problem, Soles, Leather, Shoe Designing

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## 20 Design and analysis of solar parabolic trough collector

Paper ID V8I1-1184 · Pages 125-132 · Mechanical Engineering

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**Chirag Thakur**, Student, Vivekanand Education Society's Polytechnic, Mumbai, Maharashtra

Solar energy is radiant light and heat from the Sun that is harnessed using a range of ever-evolving technologies such as solar heating, photovoltaics, solar thermal energy, solar architecture, molten salt power plants, and artificial photosynthesis. A parabolic trough is a type of solar thermal collector that is straight in one dimension and curved as a parabola in the other two, lined with a polished metal mirror. In this report, the study of parabolic shaped collector, receiver tube, and loading that model in Ansys was being done and studying about various concepts used in the same. HTF (Heat Transfer Fluid) used in this project is water, which will pass through a solar absorber tube at a certain velocity. After passing the fluid, the Temperature and Flowrate of the fluid were checked. The Numerical Solution was done for water as HTF and simulated for 9 AM to 4 PM. The maximum temperature obtained was 306.75 K at 1:00 PM. Therefore, the output Temperature contour was done by taking 1 PM as time.

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**Keywords:** PTC, HTFs, HCE, SPTC, CFD, and DNI

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## 21 Muslim women professional education opportunities UNESCO’s Agenda 2030 Policy forwarding Statistical Analysis and students interests of forecast data

Paper ID V8I1-1193 · Pages 133-139 · Social Studies

**Heena Kowsar**, Research Scholar, Department of Sociology, Sri Krishnadevaraya University, Anantapur, Andhra Pradesh

**Professor R. Vijaya Krishna Naidu**, Professor, Department of Sociology, Sri Krishnadevaraya University, Anantapur, Andhra Pradesh

Higher education is the basic must and should need in this competency world and fundamental requirement for the advancement and evolution of universal community. Gender inequality in education throwback to the different position of women in highly gender biased social order. This is true not only of developed societies but also of developing societies like India where women are at a drawback inspiration to series of educational programs and improvement.In all of the religious communities, Muslims are the moderate trained in education part of Indian Society and Muslim women the lowest one.Dr.M.APJ ABDUL KALAM sir said higher education which leads to the nation right way of greatness with stand longer span.As per UNESCO's agenda is completely interconnected to its attempts to promote the right to education as follows Indian CONSTITUTION and support to the achievement of the Sustainable Development Goals (SDGs).The backwardness among Muslim women in collation with Othethan-The Muslim women in India has become a matter of concern at present world.This present paper is deliberate to numerically expressed and analyzed the role of higher education along with it's abundant opurtinity drive statements in conduct the research to elevate students interesting opinions and their position especially in the marginalized outcome and Muslim minority category of Indian community.

**Keywords:** Higher education for Muslim minority women, UNESCO, Statistical Forecast Data

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## 22 Software testing life cycle and its efficiency

Paper ID V8I1-1215 · Pages 140-142 · Software Engineering

**Lok Shan Chan**, Independent Researcher

The software testing life cycle (STLC) is the sequence of activities that takes place within the software testing process. By following a logical STLC, an organization is able to develop a quality plan that is more likely to yield superior results. Every organization's ultimate goal is to provide its customers with a flawless product. Customers are easily turned off by bug-filled user experiences. As a result, when businesses became aware of this, they began incorporating testing. Since then, testing has evolved into a critical component of every organization's operation. Over the last few decades, there has been a shift in the competency of testing. It is important for businesses to recognize that software testing should have its own life cycle which can increase the efficiency of testing.

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**Keywords:** Software Testing Life Cycle, Testing, and Product.

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## 23 Relevance of newspapers in the era of the internet

Paper ID V8I1-1217 · Pages 143-150 · News And Internet

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Newspaper is the traditional way to spread information far and wide. It was better known as a “mirror of the society. In our day-to-day life’s Internet became a very essential part of people’s lives. Internet is not only confined to gathering news or information, today’s internet services include selling electronic devices, clothes, food, and many more things, earning and controlling money, communicating with people all over the world using various platforms, and these are just some of the few things you can do using the Internet. This paper also talks about the history of newspapers which was started in the early 17th century & as well as the history of the internet which was started around the 80s and how the internet took the huge leap in not only spreading news but even other recreational things. This research studies how newspapers are still a relevant and important part of society in the era of the internet. The paper also tries to differentiate between newspaper and the internet and their advantages in their respective fields. This study is done through content analysis and public opinions.

**Keywords:** Newspaper, Internet, Relevance of Newspaper, Comparison between Newspaper and Internet, History of Newspaper and Internet.

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## 24 Deadlock Detection in Concurrency System Using Timed Petri Net

Paper ID V8I1-1182 · Pages 151-154 · Computer Engineering

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**Amany Khalifa Alarbish**, Assistant Professor, Sabratha University, Sabratah, Libya
**Amal Apojila Oshah**, Lecturer, Sabratha University, Sabratah, Libya

Deadlock is a state in which each user of a group of users on networks( distributed system) waits for another user, including itself to take action, such as sending a message or using network resources commonly releasing a lock, this lock is a common problem facing users in network systems(NWSs), it is named deadlock problem. This problem is occurring in distributed systems where software and hardware share resources through network devices. The deadlock problem has been received. To solve the deadlock problem the important step is deadlock detection which helps us to void the deadlock problem.

**Keywords:** Deadlock, Timed Petri Nets, NWSs, Distributed System, Concurrency System

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## 25 On-road condition analysis of shock absorber using Arduino UNO

Paper ID V8I1-1220 · Pages 155-160 · Mechanical Engineering

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**Prasad Pund**, Student, Vishwakarma Institute of Technology, Pune, Maharashtra
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**Mangesh Chaudhari**, Professor, Vishwakarma Institute of Technology, Pune, Maharashtra

In this paper design modification of suspension, spring has been studied. This study has been done on Hero Honda splendor vehicle. In this paper, the performance of the Shock absorber is done by placing a piezoelectric sensor in the strut of the vehicle, and the real-time loads acting on the vehicle is obtained with ARDUINO UNO microprocessor board and is connected to the Display/computer unit to save the load value with respect to time. Continuously monitoring the actual load acting on the components in real-time leads to the determination of the actual range of loads acting on that component in that particular environment, based on which the component can be designed on both materials and structurally for that concern environment which leads to avoiding overestimation of loads and additional weight built up. The vehicle handling becomes very difficult and leads to an uncomfortable ride when bouncing is allowed uncontrolled. Hence, the design of spring in a suspension system is very crucial. The analysis is done by considering bike mass, loads, and no of persons seated on the bike. Creation of structural component done by using design software CATIA, now the values are imported to ANSYS workbench for fatigue analysis to calculate the stress, stress, total deformation for on-road condition.

**Keywords:** Shock Absorber, Piezo Sensor, Arduino UNO, CATIA V5 R21, ANSYS, Fatigue Analysis

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## 26 Lexical analyzer using DFA

Paper ID V8I1-1238 · Pages 161-164 · Theory Of Computation

**Varad Ingale**, Student, Vishwakarma Institute of Technology, Pune, Maharashtra
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**Vivek Verma**, Student, Vishwakarma Institute of Technology, Pune, Maharashtra
**Abhishek Yeole**, Student, Vishwakarma Institute of Technology, Pune, Maharashtra
**Sahil Zawar**, Student, Vishwakarma Institute of Technology, Pune, Maharashtra
**Zoya Jamadar**, Student, Vishwakarma Institute of Technology, Pune, Maharashtra

The definition of the term lexical is derived from the word "lexeme" in lexical analysis. In linguistics, a lexicon is an abstract morphological element. There are many stages or passes in the compiler. Each phase is significant, but the parser plays a critical part in the compilation process. Text editors, information retrieval systems, pattern recognition algorithms, and language compilers all make use of lexical analyzers. A lexical analyzer, lexer, scanner, or tokenizer is a program in the compilation step that does lexical analysis. The lexical analyzer is used in a variety of computer science applications, including word processing, information retrieval, pattern recognition, and language processing. The goal of this paper is to the operation of a lexical analyzer in the most direct way possible in order to give in-depth understanding of the lexical analyzer phase.

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**Keywords:** DFA, Interpreter, Lexical Analyzer, Syntactic Analyzer

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## 27 The effect of overtaking disturbances on the motion of strong plane shock wave in a highly viscous medium

Paper ID V8I1-1218 · Pages 165-168 · Physics

**Dr. Kamlesh Kumar**, Associate Professor, Agra College, Agra, Uttar Pradesh
**Dr. Arvind Kumar**, Assistant Professor, Daryao Singh Rathore Memorial Degree College, Gularia, Uttar Pradesh

The effect of overtaking disturbances, the motion of strong plane shock wave in a highly viscous medium has been investigated by Chester-Chisnell- Whitham method. It is applied to obtain the analytical relations for shock velocity and shock strength for free propagation of shock. These relations are modified in presence of overtaking disturbances. The obtained expansions are computed and discussed in the table.

**Keywords:** Shock Wave, Ccw Method, and Viscosity

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## 28 Applications of molecular markers in aquaculture and fisheries-a detailed study

Paper ID V8I1-1228 · Pages 169-178 · Life Sciences

**Sai Mounika Muramulla**, Research Scholar, Acharya Nagarjuna University, Guntur, Andhra Pradesh
**Ketham Giri Babu**, Research Scholar, Andhra University, Vishakapatnam, Andhra Pradesh
**R. Rajeswari**, Lecturer, Osmania University, Hyderabad, Telangana

Hereditary variety in an animal category upgrades the capacity of a living being to adjust to changing climate and is essential for the endurance of the species. Hereditary variation emerges between people prompting differentiation at the degree of the populace, species, and higher-order scientific categorizations. The hereditary variety information has changed application in research on advancement, conservation and the executives of normal assets and hereditary improvement programs, and so forth Improvement of Molecular hereditary markers has amazing capacity to distinguish hereditary investigations of people, populaces or species. These atomic markers joined with new measurable improvements have altered the analytical power, important to investigate the hereditary diversity. Atomic markers and their factual examination changed the scientific power, important to explore the hereditary variety. Different atomic markers, protein or DNA (mt-DNA or atomic DNA such as microsatellites, SNP, or RAPD) are presently being utilized in fisheries and hydroponics. These markers give different logical perceptions which have importance in hydroponics practice as of late, for example, 1)Species Identification 2) Genetic variety and population structure study in normal populaces 3)Examination among wild and incubation facility populaces 4) Assessment of segment bottleneck in normal populace 5) Propagation helped recovery programs. In this audit article, we have concentrated on the essentials of sub-atomic hereditary qualities, the outline of usually utilized markers, and their application alongside their limits (significant classes of markers) in fisheries and hydroponics studies.

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**Keywords:** Genetic Diversity, Molecular Markers, Microsatellite, Aquaculture

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## 29 The positive impact of collaboration on teams' performance

Paper ID V8I1-1224 · Pages 179-184 · Management

**Prakhar Jain**, Student, Vidya International School of Business, Meerut, Uttar Pradesh

The motivation of the review paper is to find out the advantages and the positive impact of collaboration between team members on the performance of a team and motivate members to use the collaborative techniques on a regular basis. The steps to achieve effective collaboration are also defined. Initially, the definitions are clarified. A team is defined as a collection of like-minded people who have banded together to achieve a common objective with an average size between 4 to 20 members. Collaboration is working in sync as a group. Then twenty unique research papers are reviewed. Finally, the findings are presented with highlighting the positive impact collaboration has on teams and how it can be achieved by teams to their own advantage.

**Keywords:** Collaborative Teamwork, Improving Team Performance, Management, Leadership

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## 30 Bonafide owner's under defective titles: an insight into property law.

Paper ID V8I1-1247 · Pages 185-193 · Law

**Srijita Chattopadhyay**, Vakeelspot Technologies Pvt. Ltd., Bangalore, Karnataka

Property can be defined as Ownership coupled with possession and sufficient right or interest to claim the property. The primitive concept of property was that a property consisted of two major elements namely corpus i.e. body and animus i.e. intention to hold the property. In recent times, due to the development of subject matters that act as property even without possessing a body and people claim ownership over it, like Intellectual property the main element of a property has been reduced to that of only "Animus". Any property cannot exist in an ambiance which means without any claim or a title or ownership. Transfer of Property Act, 1882 deals with Intervivos Trans of Immovable Property. Transfer of Property Act is not exhaustive on its own and the purpose of the act is limited. It does not even deal with all the types ofIntervivos Trans of Immovable Property i.e. Trust and Succession are dealt with in this act. Moreover, the act also has territorial restrictions. Section 5 of the Transfer of Property Act defines the transfer of property as an act by a living person is present or in the future to one or more other living people which may include a company, an association, or a body of an individual, to himself or to himself and one or more other living people. Transfer of Property has 137 sections divided into 8 parts. Sections 1 to 5 deal with general sections, Sections 6 to 53A deal with general concepts within which Sections 6 to 32 deal with general concepts of both movable and immovable property and Sections 38 to 53A deals which concepts that talk specifically about the immovable property, Sections 54 to 57 talks about the sale of immovable property, Sections 58 to 104 specifically deal with mortgage, Sections 105 to 117 are concerned about the lease, Sections 118 to 121 are about Exchange, Sections 122 to 129 deals with gift and Sections 130 to 137 talks about additional claims in regards to immovable property. The present

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article deals with Bonafide owners under detective titles which is restricted strictly to that of transfer of immovable property and the rights, compensation, and other protection guaranteed under the Transfer of Property Act along with a few exceptions which are provided under this act in part under Chapter II part B(Of transfer by an act of parties- transfer of immovable property). This article aims at highlighting the rights that are guaranteed implicitly under the Transfer of Property Act to purchasers or owners who believe that they have a bonafide claim of ownership over the property, but the ownership so granted by the initial owner or the person transferring the owner is false and therefore, the transferee does not have a valid claim over the property even though he believes that he had entered into a valid or good transaction with the transferee. The defective title so granted to the transferee is due to the false proclamation, misunderstanding, or due to certain other acts of the transferor. These rights are so given to the bonafide owner under defective title also comes coupled up with duties and exceptions and the article intends on explaining the same with reference to certain case laws.

**Keywords:** Property Law, Transfer of Property, Defective Title, Bonafide Owner, Ownership

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## 31 Qust (Saussurea Lappa C B Clarke): A Review

Paper ID V8I1-1243 · Pages 194-199 · Pg Scholar In Ms

**Dr. Syeda Sumaiya**, Research Scholar, Department of OBG, National Institute of Unani Medicine, Bengaluru, Karnataka
**Dr. Wajeeha Begum**, HOD, Department of OBG, National Institute of Unani Medicine, Bengaluru, Karnataka

Saussurea lappa C.B. Clarke, also known as qust, is distributed more or less throughout the globe. It is an important member of the Asteraceae family as it is well known all over the world for its traditional medicinal uses. Numerous phytoconstituents have been reported from the plant by different authors that are responsible for many biological effects such as anti-inflammatory, anti-arthritis, anti-bacterial, anti-fungal, anti-oxidant, anti-tumour, spasmolysis, cortisol-lowering effect, a bronchodilator, antiviral, inhibitory effects on killing activity of cytotoxic T-lymphocytes, antiangiogenic effects, anti-parasitic, CNS depressant, anti-cancer abilities and anti-diabetic activities. terpenes such as costunolide, dihydrocostunolide, 12 methoxydihydro costunolide, dihydrocostus lactone, dehydrocostus lactone , α-hydroxy dehydrocostus lactone, β- hydroxy dehydrocostus lactone, lappadilactone , mokko lactone, betulinic acid, betulinic acid methyl esters cynaropicrin, reynosin, santamarine , saussureamines A-C , αcyclocostunolide, alantolactone, isoalantolactone , isodihydrocostunolide, βcyclocostunolide , β- hydroxyl arbusculin A, arbusculin B, saussureal and so on, which have antitumor and anti-inflammatory properties. In Unani literature, Roots are of three type’s qust behri or qust arbi, qust hindi and qust shirin. The present article describes a detailed review of literature of this plant species including taxonomy, pharmacology, Phyto Chemical Constituents and pharmacological activities in an organized way. This review paper will surely serve as an important source for future scientific investigations on this plant.

**Keywords:** Saussurea Lappa C.B. Clarke, Qust Antiinflammatory Spasmolysis, Phyto Chemical Constituents.

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## 32 An Attempt to Measure the Knowledge Level and Opinion of Farmers for Kisan Credit Card Scheme in Iglas Block Of Aligarh District

Paper ID V8I1-1201 · Pages 200-205 · Agricultural Geography

**Dr. Rajni Sharma**, Post-Doctoral Fellow, Department of Geography, Aligarh Muslim University, Aligarh, Uttar Pradesh

One of the most cutting-edge, well-known, well-liked, and non-discriminatory financial products, the Kisan Credit Card, aims to fund agriculture. In order to better understand the Kisan Credit Card in Agriculture, this study was written. In a short period of time, the Kisan Financing Card has established itself as a popular credit option among farmers. KC Card has been widely praised and welcomed by bankers and farmers alike, and it is predicted that this would assist farmers acquire quick and prompt access to much-needed institutional finance. Research on farmers' perceptions of the KCC was carried out in the Aligarh district of Uttar Pradesh with the primary goal of assessing farmers' knowledge and understanding of the program. A total of 240 farmers from Iglas block of Aligarh District were chosen for the study. It is recommended that farmers' views on the KCC be given equal weight in order for policymakers to make the necessary reforms to make the system more feasible.

**Keywords:** Credit, Farmer, Agriculture, Loan, Knowledge

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## 33 Design and analysis of seismic retrofitting of building

Paper ID V8I1-1231 · Pages 206-207 · Structures

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**Chaitresh Kadam**, Student, Vivekanand Education Society's Polytechnic, Mumbai, Maharashtra
**Saurav Mahto**, Student, Vivekanand Education Society's Polytechnic, Mumbai, Maharashtra
**Fatema Trawadi**, Lecturer, Vivekanand Education Society's Polytechnic, Mumbai, Maharashtra

Earthquakes are a crucial problem worldwide since it leads to disastrous damages such as failure and collapse of buildings, loss of human lives, and loss of homes. In addition, earthquakes lead to a massive economy including loss of built structures and recovery costs of damaged buildings and infrastructure. In addition, the earth consists of three layers; the first one is the crust layer which is the surface of the earth, the second one is the mantle layer which is the second inner part of the earth, and last one the core layer which is the most inner part of the earth, When the surface of the earth creates a sudden movement, this in turns creates an earthquake, and strain energy is released causing the seismic waves through the crust.

**Keywords:** Seismic Retrofitting, Earthquake, ETABS Software, AutoCAD

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## 34 Maternal health and child care knowledge among farm women and associated factors

Paper ID V8I1-1244 · Pages 208-212 · Human Development

**Manjula Patil**, Assistant Professor, University of Agricultural Sciences, Dharwad, Karnataka
**Shakuntala Patil**, Research Scholar, University of Agricultural Sciences, Dharwad, Karnataka

A study on ‘Maternal health and child care knowledge among farm women and associated factors’ was conducted at University of Agricultural Sciences, on 300 farm women selected from Hubballi and Dharwad thalukas of Dharwad district, Karnataka state. Maternal health and child care knowledge questionnaire developed by AICRP-CD unit from PJTSAU was used for the study. Results on component wise maternal health and child care knowledge revealed that, more than 50 per cent of rural women were found to have average knowledge level of health, hygiene and high knowledge level of nutrition. Overall maternal health and child care knowledge showed that, about 54.3 percent of women had ‘poor’ knowledge about maternal health and child care while 45.7 per cent had ‘average’ and none of the respondents had ‘good’ knowledge regarding maternal health and child care. Among associated factors age, occupation and SES factors were found to have significant influence on maternal health and child care knowledge of rural women. Knowledge of rural women was found to be associated with age and literacy status of the mother. So, there is a need to give educational interventions to improve knowledge level of all reproductive age group women especially adolescent girls, married, pregnant and lactating mothers.

**Keywords:** Maternal Health, Child Care, Knowledge, Farm Women, Occupation

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## 35 Gossypiboma neck rare mimicker of tumor recurrence

Paper ID V8I1-1251 · Pages 213-216 · Radiology

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**T. D. Sherpa**, Military Hospital, Gangtok, Sikkim
**Giriraj singh**, Professor, Military Hospital, Agra, Uttar Praddesh

Retained foreign bodies (RFB) or Gossypibomas are rare causes of lumps. They can present with symptoms several years after surgery. We encountered the presentation of a patient with RFB or gossypiboma after total thyroidectomy and ablative session of I131 therapy with complaints of swelling on the left side of the neck since 2mths, discharge from post-operative drain site since one month associated with pain during deglutition. The Discovery of such a case of RFB in the neck providentially at an early stage, during the investigation of such a lump, is exceptional. We report such a singular case.

**Keywords:** Gossypiboma, Textiloma, Retained Foreign Body, Malignancy/Tumor, Concomitant/ Coexistent Pathology

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## 36 Survey paper on Worry-Free 2.0- IoT based solution for smart home

Paper ID V8I1-1237 · Pages 217-219 · Internet Of Things

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**Dhirajkumar Gupta**, Assistant Professor, S. B. Jain Institute of Technology, Management and Research, Nagpur, Maharashtra
**Nisha Akhand**, Student, S. B. Jain Institute of Technology, Management and Research, Nagpur, Maharashtra
**Pranay Meshram**, Student, S. B. Jain Institute of Technology, Management and Research, Nagpur, Maharashtra
**Karan Dalwani**, Student, S. B. Jain Institute of Technology, Management and Research, Nagpur, Maharashtra
**Sanskruti Diyewar**, Student, S. B. Jain Institute of Technology, Management and Research, Nagpur, Maharashtra

We are living in an age where there is innovation every day, but still, we live in the same conventional houses. We should aim to induce some technology to our houses too. So, by considering this scenario we have developed a module that will transform our traditional houses into modern-day homes. Thus, we provided a solution for improving our lifestyle and include some of the technological advancements in our day-to-day life. Our technology was helpful to those who are specially-abled as well as those who need constant supervision. It is environmentally friendly as it helps in saving electricity. Our product will fulfill the basic requirements of daily life and ensure the safety of that family. Our product portfolio consists of products that can ensure the security of the home and bring convenience to our lifestyle. One of our products is smart to switch which can operate any appliance from any remote location. Our second product is an intruder alert, if any intruder tries to break into our house, then an alert will be sent to the owner of the house. Unnecessary electricity wastage is one of the biggest concerns of today's time, to solve this we have developed a module which will automatically turn on and off the light during day and night. Our fourth product is a gas leakage alert, if there is an LPG gas leak our product will detect it and will take measures accordingly.

**Keywords:** Smart Home, ESP8266, Internet of Things, Safety, Security, Convenience, LPG Gas Leak

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## 37 Life in Sundarbans: Spatial Dimensions of Amitav Ghosh’s Gun Island

Paper ID V8I1-1259 · Pages 220-224 · English Literature

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**Dr. T. K. Pius**, Associate Professor, St. Aloysius College, Thrissur, Kerala

Space and Time were always treated as a fascinating matter for the aspiring research fraternity of English literature. It is of contemporary relevance and practicality to discuss the topic in detail. Many theorists like Henry Lefebvre, Edward Soja, Yi Fu Tuan were leading the discussions based on Space through their seminal literary works. Here intention of this paper is to analyse the novel Gun Island in the light of space theory and study how spatial dimension were employed by Amitav Ghosh in his narrative. Sundarbans, the tide country is the focus of the narrative though which he talks about the major themes like marginalisation, trauma of the destitute, man vs. nature conflict and so on. The inclusive view of Sundarbans especially Lusibari is narrated here pinpointing the issues of refugees, ordeal of Dalits, Natural calamities etc. Lusibari, its people their beliefs, jobs, social conditions, educational background, economic aspects, and so on were talked about. The uneducated people who were strong believers and how intimately they keep and pass on their tradition beliefs, legends etc were shown in the novel. This paper will add knowledge regarding the space Lusibari and its culture

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to the reading public.

**Keywords:** Space, Narrative, Historical Fiction, Migration

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## 38 Majeeth (Rubia codifolia linn): A review

Paper ID V8I1-1261 · Pages 225-228 · Clinical

**Shabnam Bano**, Research Scholar, National Institute of Unani Medicine, Bengaluru, Karnataka
**Wajeeha Begum**, Professor, National Institute of Unani Medicine, Bengaluru, Karnataka

Rubia cordifolia Linn also called as common Madder or Indian Madder, is a species of flowering plant. Rubia cordifolia is a branched climber with small, greenish white flowers that are arranged in a cluster of round, fleshy, purple fruits. Its roots have a brownish red bark from which a red dye is obtained. This plant grows well in hilly areas, and the root has medicinal values It is an important member of the Rubiaacea family. Dried roots of Rubia cordifolia, is a rich source of anthraquinones responsible for its traditional, phytochemical and pharmacological activities. Today clinical investigations of herbal formulations and their market preparations, both are on demanding because of better safety and efficacy without or minimal side effects. Many studies suggested that Rubia cordifolia has many biological effects such as antioxidant, anticancer, anti-inflammatory and analgesic, hepato-protective, anti-acne, blood purifier activity, astringent, antimicrobial, anti-dysentric, antiseptic, nephron-protective properties. The present article describes a detailed review of literature for this plant species including taxonomy pharmacology and photochemistry in an organized way. This review paper will surely serve as an important source for the future scientific investigations on this plant.

**Keywords:** Rubia Cordifolia, Anti-Inflammatory, Antidiabetic, Majeeth Hepato-Protective Pharmacology

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## 39 Detection of Brain Tumors from MRI images using Improved Fuzzy C means and K means template-based algorithm

Paper ID V8I1-1256 · Pages 229-236 · Image Analysis

**Karan Vikram Singh Bhatia**, Independent Researcher

For decades even with the advancement of scanning and evolving imagery systems, the detection of tumors present in the brain has become increasingly challenging and is still one of the most sensitive areas in the field of medicine. In this research work, a enhanced model is proposed in which I have employed a combination of two algorithms. The first algorithm is the K Means Clustering which is a method of vector quantization. The second is the Fuzzy C-means clustering in which each data point can be attributed to more than one cluster. When used together the algorithms give enhanced performance and is called the TKFCM algorithm. Here in this paper, first in order to initialize the segmentation the k-means algorithm is used and the template is selected based on the Gray level of the image. Then the membership that is updated is primarily determined using the distance from the centroid of the cluster to the data points of the cluster using the FCM algorithm. Next, the improved FCM clustering algorithm is fundamentally used to detect the position of the tumor based on the function that is obtained by different features that include energy, contrast, entropy, homogeneity, dissimilarity

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and also the correlation. The results of the paper indicate that the algorithm is capable of detecting tissues that are abnormal in a improved time window.

**Keywords:** Gray Level Intensity, Entropy, TKFCM Algorithm, Extraction, Feature, Clustering of T Means, K Means Algorithm Based On Template, Homogeneity

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## 40 Universal Turing machine simulator

Paper ID V8I1-1268 · Pages 241-245 · Computer Science And Engineering

**Rohit Gurav**, Student, Vishwakarma Institute of Technology, Pune, Maharashtra
**Sakshi Suryawanshi**, Student, Vishwakarma Institute of Technology, Pune, Maharashtra
**Parth Narkhede**, Student, Vishwakarma Institute of Technology, Pune, Maharashtra
**Sankalp Patil**, Student, Vishwakarma Institute of Technology, Pune, Maharashtra
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**Kuldeep Vayadande**, Professor, Vishwakarma Institute of Technology, Pune, Maharashtra

In this, we introduce a Turing Machine and Pushdown Automata Simulators as an effective setting for getting to know technique models and automata concepts. The 2-fold contribution of these paintings could be a novel use of modern-day generation to enhance getting to know and longitudinal experimental analysis of its use in context. An introductory evaluation suggests the effectiveness of the simulators inside the schoolroom

**Keywords:** Turing Machine, Tape, Automata, Pushdown Automata, Computational Model

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## 41 Getting art to the market: how is the price of paintings determined?

Paper ID V8I1-1273 · Pages 246-251 · Art And Economics

**Divyanshi Saroff**, Student, Independent Researcher

This paper is aimed at finding a correlation, if any, between the factors determining the price of an artwork. Based on quantitative analysis of a personal survey with 31 respondents, the factors do not form any particular abstract formula which could be derived. It was indicative that the surveyees approached pricing in a variety of ways. To make sense of the variety, the author used an inductive technique to identify and categorize various price styles. The results of the polls were tallied to determine the variables that each artist considered when making their selection. Individual respondents' most prevalent choice aspects are revealed through this method.

**Keywords:** Pricing of Art, Economics of Art, Paintings, Pricing Factors, Perspectives on Value, Differential Utility

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## 42 Mathematical modeling of the electric scooter battery pack using SCILAB

Paper ID V8I1-1270 · Pages 252-257 · Electric Mobility

**Hrushikesh Anil Chari**, Student, Sinhgad College of Engineering, Pune, Maharashtra
**Dr. Rajendra Katikar**, Sinhgad College of Engineering, Pune, Maharashtra

Electric vehicles have been a sustainable and environment-friendly mode of transport have gained immense importance since the beginning of the 21st century. Mathematical modeling has been a boon for the design procedure, which helps us understand the real-time output of our design without practical implementation. The research paper will be discussing mathematical modeling for an electric scooter battery pack. It will be done by calculating the energy consumption for the desired output by an EV and then later comparing the different cells by considering various battery parameters. The modeled scooter would be capable of replicating the output similar to a current CV. SCILAB will be used as the simulation software. For calculating the real-time energy consumption, WLTP cycle data will be used. The data for the WLTP drive cycle is based on the real-time driving scenario. It would help us to estimate the energy consumption that can be close to the practical value. For accurate results, it is necessary to test the designed model on a dynamometer for better optimization.

**Keywords:** Electric Vehicle, Battery Pack, WLTP, and Scilab

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## 43 Tukhm Khatmi (Althea officinalis Linnaeus): A review

Paper ID V8I1-1275 · Pages 258-263 · Clinical

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Althaea Officinalis Linnaeus is a perennial plant with light brown colored, long and thick roots, ovate-cordate, slightly toothed leaves, and pale pink or pale purple-colored flowers. It is commonly known as “Marsh Mallow” is one of the important medicinal plants used in Unani medicine, All the parts contain mucilage, and it is having emollient, analgesic, astringent, hemostatic, expectorant, laxative, cleansing, demulcent, concoctive, diuretic, emmenagogue, anti-inflammatory, and exhilarant properties.4 In Unani medicine, Khatmi has been used for several centuries to treat inflammatory disorders like Warme Reham (metritis), Warme Piston (mastitis), Warme Ama (enteritis), Wajaul Mafasil (arthritis), Qaulanj (colitis), Zatur Riya (pneumonia), Warme Shoib (bronchitis), etc.5 chemical constituents contain Pectins, Hypolaetin-8-glucoside, Isoquercitrin, kaempferol, caffeic, pcoumaric acid, ferulic acid, p-hydroxybenzoic acid, salicylic acid, p-hydroxyphenyl acetic acid, vanillic acid. Scopoletin, herniarin, warfarin β-sitosterol, campesterol, stigmasterol, Isoquercitrin, ellagitannins, gallic acid L-Aspartic Acids, L-Asparagine, Threonine, Methionine, L-Glutamic acids which helps act as anti-Inflammatory, immunomodulator, antimicrobial, antiviral anti-cancer, hypoglycaemic, hypolipidemic, scavenging activity, Antitussive and anti-complement activity in the human body. This paper reviews the detailed literature of this plant species including taxonomy, pharmacology, Phyto Chemical Constituents, and pharmacological activities in an organized way. This review paper will surely serve as an important source for future scientific investigations on this plant.

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**Keywords:** Tukhm Khatmi, Althea Officinalis, Anti-Inflammatory, Immunomodulator Antimicrobial

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## 44 Face recognition-based student’s attendance system using DLIB

Paper ID V8I1-1279 · Pages 264-269 · Computer Science

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**Kiran Chaudhari**, Professor, Marathwada Institute of Technology, Aurangabad, Maharashtra

Daily attendance tracking is an integral part of any organization’s day-to-day activity. It is also very important to have the records with the ease of maintaining them. Roll call method is considered as time taking and it also has any possibility of proxy marking. The proposed work speaks about the implementation of an attendance system by using face recognition. The Marked attendance is stored in a database and can be considered for future purposes. At the time of marking attendance, this system will automatically take the pictures and apply implemented algorithm to Mark the correct attendance. The attendance is marked in the form of name, date, and time. Histogram of oriented gradient method is implemented for the detection and facial landmark estimation is implemented for computation and comparison of the students the implementation is done on a real-time basis.

**Keywords:** DLIB, HOG, Face Recognition, Landmark, Detection

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## 45 Design and analysis of types of footings

Paper ID V8I1-1278 · Pages 270-271 · Structure

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**Ayush Jitendra Singh**, Research Scholar, Vivekanand Education Society's Polytechnic College, Mumbai, Maharashtra
**Divya Vishwanath chaugule**, Research Scholar, Vivekanand Education Society's Polytechnic College, Mumbai, Maharashtra
**Atharva ramdas Yadav**, Research Scholar, Vivekanand Education Society's Polytechnic College, Mumbai, Maharashtra
**Fatema Trawadi**, Lecturer, Vivekanand Education Society's Polytechnic College, Mumbai, Maharashtra

This paper presents a comparative study among three types of footings officering shape to obtain the more economical dimension of the contact surface, i.e., a comparison is realized among the rectangular footings, square and circular in terms of the contact area with soil, when the load that must withstand said structural member is applied. The models presented in this paper satisfy the following conditions. 1) The Minimum stress should be equal to or greater than zero because the soil is not capable of withstanding tensile stresses. 2) The maximum stress must be equal to or less than the allowable capacity that can be capable of withstanding the soil. According to the results, tables show that the circular footings are more economic, subsequently the rectangular footings and last the square footings.

**Keywords:** STAAD Pro, Residential Building, AUTOCAD, Microsoft Excel, with Bearing Capacity Method/Limit State Method

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## 46 Interpersonal relationships in work environment its influence on the productivity of an organisation

Paper ID V8I1-1190 · Pages 272-275 · Commerce And Management

**Dr. Shobha Jonathan**, Assistant Professor, St. Francis' College, Koramangala, Bengaluru, Karnataka
**Veena Karagudari**, Assistant Professor, Jindal College for Women, Bengaluru, Karnataka.

How to enhance inner communique inside our very own corporation and stimulate personnel to understand an organization wherein they paintings as their very own and try for joint success? In order to acquire powerful inner communique, it's far essential to contain personnel in all organization`s movements and supply them a danger to specific their perspectives and opinions. It is important to pay attention to the man or woman desires of humans and constantly paintings to enhance inner communications. Business communique is a totally essential a part of commercial enterprise, and refers back to the transmission of messages, change and processing of data and contacts with commercial enterprise companions and the public. The communique in the corporation includes all personnel, at the same time as communique out of doors the corporation includes most effective few. Vertical communique takes location in the corporation from better to decrease organizational levels (authoritative atmosphere) or in different case upward from subordinates to superiors.

**Keywords:** Interpersonal, Communication, Employees, Work Ethics, Work Environment

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## 47 The Future of Online Therapy – PsAIch Emotracker

Paper ID V8I1-1191 · Pages 276-278 · Wearable Technology

**Mohamed Irfan Karukappadath**, Student, Independent Researcher
**Anika K. S.**, Student, Independent Researcher

Good mental health is essential to a person’s overall health and well-being. Mental health includes our emotional and social well-being. It affects how we think, feel, and act. As the COVID-19 pandemic upends the lives of young people around the world, a long-simmering mental health crisis threatens to boil over. Demand for mental health care is skyrocketing, and yet support services have been significantly curtailed. Our solution to this problem is the PsAIch Emotracker. The PsAIch Emotracker makes use of various existing technologies, to help psychiatrists in the efficient therapeutic treatment of mental illnesses virtually. This report showcases a design for a potential remote mental-health treatment system and aims to elicit insights about working of the PsAIch Emotracker and its potential applications.

**Keywords:** Mental Health, Online Therapy, Wearable Technology, Emotion Tracker, EEG headband, Psychotherapy, Covid-19, Smartwatch,

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## 48 Estimation, costing & innovative design of airport

Paper ID V8I1-1286 · Pages 279-280 · Civil Engineering

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**Fatema Trawadi**, Lecturer, Vivekanand Education Society's Polytechnic, Mumbai, Maharashtra

This paper presents an analysis of the dynamics of the evolution of multi-airport systems worldwide that can help to guide their effective development in the future. Given the capacity constraints on existing major airports, the development of multi-airport systems is going to be a key mechanism by which air transportation systems around the world will be able to meet future demand. In order to better understand how these systems will evolve, a systematic case study analysis of 59 airport systems worldwide was performed. The analysis showed significant differences in the evolution of multi-airport systems across world regions. In the United States and in Europe, the recent development of multi-airport systems primarily involved the emergence of secondary airports.

**Keywords:** Estimation & Costing, 3D Modelling, Sketch Up Pro

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## 49 A study on awareness and challenges of retailers in the digitalization era

Paper ID V8I1-1282 · Pages 281-286 · Entrepreneurship

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**Bhavyashree R. Upadhyaya**, Student, Jain University, Bengaluru, Karnataka
**Dr. Renu Rathi**, Associate Professor, Jain University, Bengaluru, Karnataka

The study is mainly on creating awareness about digitalization and also how in recent times retail business has been impacted and how both online and offline businesses have equal importance. As in the current era digitalization is gaining fame, this research will also study the various ways to improve the marketing and selling strategies of these enterprises by making the best use of the online platform. The market is a competitive and dynamic place. Hence in order to sustain in this dynamic environment, the proprietor should inculcate a few efficient skills that can boom the business. One way is to be creative in their ideas, the business should think of such a product or service which has very less substitutes or is unique in its own way so that customers can differentiate the commodity of a particular business. For this research, relevant data was collected via questionnaire and was analyzed by the use of tabulation and simple percentage methods. Also, the information collected through primary and secondary sources was analyzed and interpretation is done by the use of bar diagrams.

**Keywords:** Creative ideas, Digitalization, Dynamic environment E-Commerce, Retail Business

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## 50 Impact of microplastic on environment

Paper ID V8I1-1291 · Pages 287-288 · Environment

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**Shatakshi Dolas**, Research Scholar, Vivekanand Education Society's Polytechnic, Mumbai, Maharashtra
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Microplastic particles smaller than 5 mm in size are of increasing concern, especially in aquatic environments, such as the ocean. A primary source is microbeads (

**Keywords:** Microplastic, Human Health, Wastewater, Marine Life

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## 51 Using the internet of things (IoT’s) to gain elicitation results

Paper ID V8I1-1293 · Pages 289-291 · Business Analytics

**Sagnik Roy**, Student, SRM Institute of Science and Technology, Chennai, Tamil Nadu

Elicitating with Employees help a Business Analyst understand whether the mindset of a workforce is in sync with the Stakeholders, hence, helps determine a healthy working environment. They mostly use methods like Collaborative Games, Mind Mapping, Focus Groups, Observation, etc. These methods rely on the communication skills of the Business Analyst more than data, which could be a drawback, as it may not give accurate results and make the job of Business Analyst, a lot harder. Analysts and employees, or even clients, often speak in different general languages, with analysts often being more technical in nature, while clients will often speak more from a business perspective. This makes common understanding difficult. To make this process easier, this paper has come with a solution using Internet of Things (IoT), which could show Employee performance in the form of data, and can be used to gain clearer insights on Employee opinions and characters.

**Keywords:** Business Analytics, Business Intelligence, Internet of Things, Machine Learning, Big Data, 5G Network, Embedded Systems, Sentiment Analysis, Elicitation and Collaboration, Opinion Extraction

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## 52 Nudge theory and its application for modern e-commerce markets

Paper ID V8I1-1283 · Pages 292-300 · Behavioural Economics

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**Phillip C. Liang**, Research Scholar, Wenzhou-Kean University, Wenzhou, China

Nudge theory can mainly be credited to two academics—Richard H. Thaler and Cass R. Sunstein. Thaler and Sunstein defined their concept as: “A nudge, as we will use the term, is an aspect of the choice architecture that alters people's behavior in a predictable way without forbidding any op)ons or significantly changing their economic incentives. To count as a mere nudge, the intervention must be easy and cheap" Nudge Theory has great implications in many fields such as public health, financial markets, government, fundraising, etc. In this paper, I aim to explore the question “What are some nudges that e-commerce companies exploit to increase

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sales". I have aimed to structure this paper in chronological order of the nudges that a consumer is expected to come across when buying any product. For this, I have gone onto the popular e-commerce website amazon.com and seen some of the possible nudges used there are. At the end of the paper, I also discuss the limitations of nudge theory

**Keywords:** Nudge Theory, E-commerce, Digital Nudging, Cognitive Bias

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## 53 Analytical method development of a formulation of transfluthrin, piperonyl butoxide, and cyfluthrin by GC-FID analytical technique

Paper ID V8I1-1252 · Pages 301-308 · Analytical Method Development

**Dr. K. Ayyavoo**, Scientist, Bioscience Research Foundation, Sengadu, Tamil Nadu
**Dr. C. Tamilselvan**, Sr. Scientist, Bioscience Research Foundation, Sengadu, Tamil Nadu

A simple validated Gas Chromatography-Flame Ionization (GC-FID) method has been created for a mixture of insecticide and a chemical separation and quantitative measurement of Transfluthrin, Piperonyl butoxide, and Cyfluthrin formulation. Because it is time-saving, dependable, cost-effective, and repeatable, this GC approach is required. Developing a simple and cost-effective approach is difficult; yet, a GC analytical method validates one's capacity to meet regulatory / SANCO standards. In the current scenario, this pesticide mixture is necessary to manage all pesticides with a single dose application. Insecticides like Transfluthrin, Piperonyl butoxide, and Cyfluthrin are used to efficiently manage insects in crop plants. There are limited separation and determination analytical methods for such an important application of combined pesticides. The simple analytical instrument GC with Flam Ionisation Detector (GC/FID) was used to detect 0.01ppm LOQ level, this approach analyses Transfluthrin, Piperonyl butoxide, and Cyfluthrin mixtures. A Rxi-5ms capillary column was used to isolate these three compounds. A 30m capillary column with a 0.25mm ID and 0.50m length was loaded into the Shimadzu GC (model: GC-2010). A pre-installed, confirmed GC solution software equipped Shimadzu instrument was used for separation and quantification, as well as data processing and computations. These three chemicals were identified and quantified separately. In a single study, the simple GC method provides a quick way to determine the total amount of these three compounds

**Keywords:** Transfluthrin, Piperonyl Butoxide and Cyfluthrin GC-FID Analysis, Validated Method, Sante/2020/12830 and ICH Guideline

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## 54 Converting chemical disposal plant Into artificial lake

Paper ID V8I1-1304 · Pages 309-310 · Civil Engineering

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Converting chemical disposal plant into artificial lake can be very useful for the areas where there are chemical industries nearby as they dumb waste chemicals or chemicals which are not useful as soil is not good due to chemical disposed, we cannot construct buildings or any structure over there to overcome this problem we have come up with this project that is converting chemical disposal plant into artificial lake.

**Keywords:** An artificial lake in a body of fresh water greater than 1 ha in arc created by human invention in a location where a lake would not naturally exist. The project is based to make an artificial lake out of the area where the soil is hampered in a very bad way.

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## 55 Analysis of underground rectangular water tank for the computation of shear force and bending moment coefficients

Paper ID V8I1-1300 · Pages 311-313 · Structural Engineering

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Rectangular tanks are common as it is use for the storage of liquids such as water, oil, petroleum products, compressed gases, etc. Analysis of such tanks is quite difficult. So, in order to analyze these tanks, various methods are used. Mostly Approximate method and Finite Element Method (FEM) are used to analyse water tanks. This paper presents a literature review on the analysis of rectangular tanks by using Finite Element Analysis (FEA) with the help of STAAD Pro software. The design and analysis of rectangular tanks requires various design charts and involves lengthy and monotonous calculations. To avoid these tedious calculations various codes and books are available which provide charts for shear force and bending moment coefficients for the design of water tanks with different support conditions. This paper gives an idea for an approach to the analysis of rectangular tanks by Finite Element Analysis (FEA).

**Keywords:** Underground Tanks, Moment Coefficients, Staad Pro V8i, Analysis of RC Tanks, L/H Ratio

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## 56 Analysis of biogas plant for VESP college canteen

Paper ID V8I1-1284 · Pages 314-315 · Biogas Plant Using Kitchen Waste

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Facing energy crisis and climate change, the world is in need of a green, efficient, carbon-neutral energy source to replace fossil fuels. The search for energy alternatives involving locally available and renewable resources is one of the main concerns of governments, scientists, and business people worldwide. Biogas, formed by anaerobic digestion of organic materials, makes sustainable, reliable, and renewable energy possible. There is potential for biogas production from kitchen waste, and at the same time, the waste itself can be treated to minimize the environmental impact and provide nutrient-rich organic fertilizer. The study’s main objective was

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to design an anaerobic digester that utilizes food waste to generate biogas for use in Vivekanand Education Society Polytechnic Institute's (VESP) kitchen. The institute's main source of energy was mainly wood fuel, supplemented with liquefied petroleum gas (LPG) which is very expensive. Hence this project may help VESP to generate Biogas by utilizing food waste, which is less expensive than Liquefied Petroleum Gas (LPG) and also environmentally friendly.

**Keywords:** Renewable Energy, Biogas, Food Waste

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## 57 Accident severity prediction

Paper ID V8I1-1313 · Pages 316-320 · Deep Learning

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**Harish Naik**, Lecturer, Jain University, Bengaluru, Karnataka

Traffic safety has always been an important issue in sustainable transportation development, and the prediction of traffic accident severity remains a crucial challenging issue in the domain of traffic safety. Based on the severity we can create awareness of happening the accidents according to the zone or place. So the goal is to predict the accident severity. Here we used classification models to find the f1 score of each model and select the best model with a high f1-score to predict the approvals. we take the input parameters, and we train data and the output will be the accident severity.

**Keywords:** Severity Prediction, Deep Learning

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## 58 Making of the Instagram bot: Python

Paper ID V8I1-1310 · Pages 321-324 · Instagram

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This document gives us information about virtual bots which are present in myriad social media platforms. Bots are abbreviated for a robot that works as commanded. In this paper, we will we focusing on bots present on the Instagram social application. Instagram helps to click, edit and share photos and videos. We can also follow family, friends, and public figures to keep up with their life. Bots behave as any regular genuine account like uploading images, following someone.

**Keywords:** Instagram, Bots, Python

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## 59 An analysis on sectorial equity mutual funds

Paper ID V8I1-1216 · Pages 325-329 · Conceptual

**Dr. M. Bhuvaneswari**, Professor, Professor, Department of Management Sciences, Hindusthan College of Engineering and Technology, Coimbatore, Tamil Nadu
**Mohammed Suhail S. R.**, Independent Researcher, Independent Researcher

The economic reforms initiated by the Indian government over the last two decades have resulted in growth in the Indian financial service sector. Investors are offered various investment avenues. But there are investment avenues with growing risk. Mutual funds one of the investment avenues offers investors wide opportunities in diversifying their risk. There is tremendous growth and development in the mutual fund industry. Mutual funds have emerged as the best in terms of variety, flexibility, diversification, liquidity as well as tax benefits. Besides, through mutual funds, investors can gain access to investment opportunities that would otherwise be unavailable to them due to limited knowledge and resources. Moreover, due to its development, the mutual fund serves as a channel for pooling the savings of a large number of people across the country and investing in funds. Diversification of funds helps in reducing risk. Investors are faced with a common problem in selecting funds according to their investment objective. This study concentrates on the performance evaluation of the sectorial equity mutual funds during the period from 2014 to 2018. For this purpose 20 schemes have been selected in 5 different sectors (each sector 4 funds). The investment performance has been analyzed with tools like standard deviation, beta, Sharpe, and Treynor ratios. The main aim of this study is to analyze the risk in the performance of the sectorial equity mutual funds. Past performance of mutual funds explains how the fund has performed in the past and accordingly one can expect positive or negative performance in the future as well. The results indicate that overall all the selected sectorial equity mutual fund schemes have succeeded in providing a fair rate of return to the investors. Using performance parameters like Sharpe and Treynor ratio. Banking sector funds have recorded higher performance associated with high risk and high returns when compared to other sectors. However, there is some substantiation that the two schemes aren’t performing below the market.

**Keywords:** Mutual Fund, Sectorial, Sharpe’S Ratio, Treynor’s Ratio, Standard Deviation, Beta Etc

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## 60 Service quality perception towards tangible attributes with reference to ‘three-star hotels’ in Hyderabad

Paper ID V8I1-1280 · Pages 330-335 · Management

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The hospitality industry always focuses on service quality and service tangibility. Customers rate the hotel service performance based on service standards provided in Hotels is treated as a benchmark for service. Service quality is an important aspect of marketing theory and practise, since good quality may lead to customer happiness and loyalty, as well as successful company outcomes. It is critical for every firm, particularly in the services industry, to comprehend and grasp the expectations and perceptions of customers about a wide variety of elements impacting customer happiness and loyalty. The importance of these factors

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develops tremendously in the hospitality industry. The purpose of this research is to determine the value of specific quality components in the hotel sector. The data was collected via a questionnaire that included nine tangible service quality indicators that respondents scored on a five-degree scale. The factorial structure of the physical parts of hotel service was also discovered throughout the investigation. The purpose of this research is to add to the current literature by emphasising the importance of tangible service quality components and their influence on business produced by 'Three Stat hotels' in the Hyderabad area.

**Keywords:** Hospitality, Service Tangibility, Loyalty,

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## 61 A study of cyberbullying detection using Machine Learning techniques

Paper ID V8I1-1311 · Pages 336-342 · Electronics And Telecommunication

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With the widespread use of online social networks and their popularity, social networking platforms have provided us with innumerable chances not previously available, and their benefits are evident. Regardless of blessings, people can be embarrassed, ridiculed, tormented, and compelled to utilize the resource of anonymous users, strangers, or peers. In this study, we offered a cyberbullying detection method to build abilities from Twitter content material by employing a pointwise mutual facts technique. We superior a supervised tool learning solutions for cyberbullying detection and multi-beauty classification of its severity in Twitter based on the one's talents. We achieved Embedding, Sentiment, and Lexicon characteristics, as well as PMI-semantic orientation, throughout the test. The extraction of features was conducted utilizing

**Keywords:** A Cyberbullying Detection Method, Machine Learning, The Naive Bayes, KNN, Decision Tree, Random Forest, and Support Vector Machine Techniques

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## 62 Preventive Ayurvedic Shalyakarma (Agnikarma, Raktamokshan, Jalaukavacharan, and Siravedhan) during Pandemic COVID-19 – A practical investigation.

Paper ID V8I1-1308 · Pages 343-346 · Medical(ayurveda)

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This is to report a single self case study of one of the author (Final BAMS-UG) student experiencing benefit of Ayurvedic Shalyakarma during working in Covid-19 Pandemic[1] as preventive and supportive treatment.Shalyatantra involves uses of various techniques or karma to facilitate surgical or para- surgical interventions and Anushalyakarma is one of them. Anushalyakarma means uses of Non-surgical instruments to

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perform surgical procedures- Agnikarma, Jalaukavacharan, Siravedhan, etc.[2] Anushalyakarma plays an important role in surgical interventions in Children and Adults who are afraid of weapons,and when there is no weapon nearby.Anushalya karma have been performed on Snayu(Mansaj) Granthi. It is a treatment of choice and preventive methodology during Pandemic. In this case Agnikarma is performed using Dr P.D Gupta's Panchdhatu Agnikarma Shalaka.[6]

**Keywords:** Shalyakarma, Anushalyakarma, Agnikarma, Pandemic.

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## 63 Preventive splenomegaly through Siravyadh during COVID-19

Paper ID V8I1-1307 · Pages 347-350 · Medical (ayurved)

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This is to report a single K/C/O Splenomegaly experiencing benefits of Siravyadh for splenomegaly as well as Coivd-19 during pandemic with supportive internal medication’s. Splenomegaly is an enlargement of the spleen which is compared to “Plihavrudhi” in Ayurveda. As per modern science surgical removal of the spleen is the last option for splenomegaly. the experience of one Case reported here showed the effect of Siravyadh to prevent splenomegaly and its recurrence. This case was mainly treated with a surgical procedure in Ayurveda called Siravyadh every monthly scence 1997 along with snehan Sweden followed by matra basti once in a year for 7 days with internal medication vardhaman pippali as rasayan and mahasudarshan Kadha 15ml × BD for 21 days. This cycle was repeated after every 3 months. As we know Covid - 19 (SARS- cov2), viral diseases caused by novel Coronavirus Impacted 220 countries in 2019-20 / 2020-21. SARS - Covid - 19 virus mostly affects the lungs first and then it affects blood parameters (changes in D - Dimer, WBC, CRP, ESR, etc ....) in this case it was found that Spleenomegaly was reduced with associated signs and symptoms and no recurrence was found. as well the patient is prevented from getting Covid - 19 infection although he is exposed to the covid positive patient.

**Keywords:** Splenomegaly, Plihodar, Plihavruddhi, Jirnajwar, COVID-19-Pandemic, Siravyadh, Vardhaman Pippali Rasayan

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## 64 Stress and Coping with Stress

Paper ID V8I1-1292 · Pages 351-357 · Pharmacy Practice

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Stress is your body's reaction to being under pressure from a circumstance or occurrence. It could be an emotional, mental, or bodily reaction. Stress is unavoidable; we must learn to live with it and successfully handle it, if not cope with it. Stress is best characterised as a syndrome caused by multiple factors with a wide range of manifestations ranging from mild to severe within the physical and mental framework of the human body. Stress can have a variety of impacts on the body, ranging from changes in homeostasis to life-threatening effects and death, depending on the nature, timing, and severity of the applied stimulus. Many diseases and pathological situations are made worse by stress, which can be a triggering or aggravating factor. Stress and sickness have a complicated relationship. Susceptibility to stress differs from one person to the next.

**Keywords:** Stress, Body’s Response, Coping Skills, Relaxation, Activity and Exercise

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## 65 Studies on the gastrointestinal parasite of local chicken (Gallus Gallus Domestica) in Sangamner region, Ahmednagar district, Maharashtra

Paper ID V8I1-1324 · Pages 358-361 · Zoology

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In the present study for determining the popularity of Gastrointestinal parasites of Local chickens(Gallus-Gallus Domestica), A sample of 90 Gastrointestinal tracts (Male and Female) were collected from the local market. The breed is like the Gavthi chicken, Broiler chicken, and R.R.chicken, a total of 30 samples of infected intestines were get dissected from each breed. Amongst them, the highest infection of parasites is observed in local Gavthi chicken (96.66%), in Broiler (53.33%), and the lowest infection is in R.R. Chicken (13.33%). The cestode and nematodes were found the mixed infection. The helminthes parasites were found amongst them the species A: Raillietina aqurdritesticulata spp. And B : Raillietina cesticillus spp. get observed in more range.

**Keywords:** Parasites, Nematode, Helminthes, Gavthi, Broiler, R.R, Raillietina Cesticillus, Raillietina Aqurdritesticulata Spp.

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## 66 Analysis of vehicle body

Paper ID V8I1-1335 · Pages 362-363 · Automobile Engineering

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The software technology is growing at a large scale, which make things like CFD Testing, Air Drag simulation very easy, time-saving, and pocket friendly. The industry has given us such a good piece of technologies such as ansys, autodesk fusion 360 etc, which should be put to good and innovative ideas to execute. They should also be used to make some modification in present day things to get a better understanding on how the thing would work in real life with some software modifications. The project focuses on less air drag for better aerodynamics and better fuel efficiency. In the old age, industry was not aware of such technology would ever exist, to design a certain part in software and play simulation to get best results to save manufacturing cost and time which highly reduces the flaw detection in real life. By doing modification in a car which was not able to succeed in the market could put this technology of simulation testing to best use. Computer simulation is need for the hour and is the future!

**Keywords:** Analysis of Vehicle Body, Automobile

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## 67 Design and simulation of body wearable antenna

Paper ID V8I1-1204 · Pages 364-367 · Antenna

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The fast development of wearable low power devices has increased the requirement of WBAN implementations. Also, there is a need to reduce the device dimensions and improve power consumption. It is also important to work on flexible antennae that may be integrated into a wide variety of applications. This paper mainly deals with remote monitoring of the elderly and athletes that affects their activities by not blending with their routine. So the main objective is to design an antenna that would be comfortable for them. A literature review on existing antenna was made and a wearable antenna is designed with size optimization. The antenna is designed using ANSYS High-Frequency Structural Simulator (HFSS) that works at an operating frequency of the ISM band(2.45 GHz). A rectangular patch made up of a Perfect Electrical Conductor (PEC) is used as a radiating patch and the ground is also made with a Perfect Electrical Conductor (PEC). The substrate material used is polyester with a relative permeability of 3.27 and a loss tangent of 0.00786. The size of the antenna is 40mm*34mm*1.51mm which is optimized. The properties such as gain(3.57 dB), directivity(3.62 dB), VSWR(1.47), reflection coefficient (-11.78 dB) are studied for the designed antenna.

**Keywords:** Flexible, PEC, Wearable, WBAN, ISM band

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## 68 Academic Achievement on Psychological Stress of Higher Secondary Students in relation to Gender and Locality of Students

Paper ID V8I1-1281 · Pages 368-373 · Education

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**Dr. M. Manivannan**, Professor, Tamil Nadu Open University, Saidapet, Chennai

Students in higher secondary education settings face a wide range of ongoing stressors related to academic demands. Previous research indicates that academic-related stress can reduce academic achievement, decrease motivation and increase the risk of school dropout. This data demonstrates that academic achievement is a significant source of stress to students. The objective of the study was to find out whether there is any significant difference between psychological stress and its dimensions with respect to gender and locality of students. Approximately 188 students as samples were taken for the study. The sample was delimited to higher secondary students Chengalpattu district is taken for the study. The descriptive survey method was used in this study. The investigator used the Psychological Stress Scale which was developed by (Rangasami P, 2018).To find out the academic achievement, the researcher prepared a self-made standardized tool. This study used percentage analysis, ‘t-test, and correlation using the SPSS package for analyzing the data. The findings of the study are that (i) majority of the higher secondary students have a moderate level of academic performance with reference to background variables (ii) therebetween boys and girls in their psychological stress and its dimensions such as depression, perceived stress, self-esteem, and academic achievement. (iii) there is a significant difference between students' locality is rural and urban with respect to academic achievement. (iv) there is a significant positive correlation exist between psychological stress and its dimensions such as depression, perceived stress, self-esteem, and academic achievement of higher secondary students with respect to gender.

**Keywords:** Academic Achievement, Psychological Stress, Higher Secondary Students

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## 69 Integration of digital devices and data streaming by Network Slicing Methods in IoT in 5G networks – A review

Paper ID V8I1-1362 · Pages 374-377 · Computer Networks-iot

**Dr. Velumani P. S.**, Professor, University of Science and Technology, Baridua 9th Mile, Meghalaya

The IoT has a large scale of integration of Digital devices in various fields of Engineering & Technology. It Provides effective communication of sensing the objects which are placed remotely. The Integration of devices is playing a major role in data transfer effectively with Accuracy, Data Integrity & Latency while making the network safely. Especially in smart devices connectivity is the emerging trend in IoT which will be focused on 5G networks. In this paper, the proposed study will be very supportive of effective utilization of devices & provide more secure & QoS services while communication among any devices through a common network

**Keywords:** 5G, RSP(Route Selection Policy), FSS(Fixed Satellite Services), MIM-NOMA(Millimeter Ware Cellular Networks with

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D2D Communications).

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70 **Intra-Cavitary Brachytherapy practice in COVID times: A prospective analysis of time durations of various procedural steps in the practice**

Paper ID V8I1-1363 · Pages 378-383 · Radaition Oncology

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Background and purpose During the COVID19 pandemic many radiotherapy centers have found it difficult to continue with their brachytherapy program. The apprehension was that the brachytherapy procedures may become unacceptably cumbersome, unsafe, and time-consuming under the prevailing pandemic. We undertook the present study to estimate and analyze the time durations of various steps during the high dose rate (HDR) intracavitary brachytherapy (ICBT) procedure for carcinoma cervix while adhering to the safety protocols. Material and methods The study was conducted at a government-run hospital from Jan till Apr 2021. We prospectively estimated the time durations of each step of the HDR-ICBT procedure starting from the time a patient was taken into the operation theater till sent to the ward. Institutional safety protocols were followed. A total of 70 consecutive ICBT procedures involving 18 patients were included in the study. In all 1048 time-duration measurements were done. Results The average time-durations were 24 minutes, 54 minutes, 54 minutes, 63 minutes, and 26 minutes for induction of spinal epidural anesthesia, completion of brachytherapy applicator placement, CT/MRI imaging and patient transport to the brachytherapy room, completion of planning and execution of treatment, and for applicator removal, respectively. The average time duration for the entire brachytherapy procedure till the patient reached to ward was 4 hrs. Conclusion The average time of four hours for completion of an HDR-ICBT procedure with Covid-19 restrictions is reasonable and has scope for further reduction. Radiotherapy centers having adequate logistic and related support may, therefore, consider continuing with their ICBT program during the pandemic.

**Keywords:** COVID 19, HDR-ICBT, Time Duration, Brachytherapy Practice, Carcinoma Cervix

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## 71 Traumas of armed conflict: a case study of child soldiers in Uganda

Paper ID V8I1-1383 · Pages 384-388 · Political Science

**Dr. Gauri Narain Mathur**, Research Scholar, Jamia Millia Islamia, New Delhi, Delhi

Children are the most endangered victims of intractable conflicts. Wherein almost 50 million children have been victim to forced displacement from their families and homes and are subjected to exploitation, forced labor as well as recruitment in the armed forces. The deployment of children as soldiers in armed conflict to commit acts of violence is a grave violation of Human Rights. Mostly these Children are recruited to wage battles and to carry out acts of violence. While the rest of them are engaged as cooks, messengers, porters, spies, and sexual slaves. It was in the year 2017 that the 'List of Shame' published by the UN Secretary-General include Afghanistan, Myanmar, Somalia, South Sudan, Syria, and Yemen whereby the state forces are involved in the recruitment of child soldiers. While in countries like the Democratic Republic of Congo and Myanmar nonstate actors such as Mai Mai Natura and Kachin Independence Army recruit children as soldiers respectively. According to the United Nations List of Shame, almost 43 state forces train and recruit Child Soldiers and almost 56 nonstate actors are involved in the recruitment of child soldiers. Over the span of the last five decades Uganda has undergone one of the deadliest civil wars in human history within the African continent. In this context what needs to be noted is the fact that Northern Uganda has witnessed civil war at the dawn of 1980 marked by the displacement of almost 4,00,000 people from their homes. With the establishment of Lord's Republican Army by Joseph Kony in the year 1987 there was an unprecedented increase in the acts of violence marked by, a series of bombings taking place in Kampala. Most of the children fell prey to this civil unrest serving either as porters or fighters to Lord's Republican Army and Allied Democratic forces. Thus, this paper seeks to examine the psychological impact and the reintegration process of Child Soldiers of Uganda.

**Keywords:** Child Soldiers, Uganda, Armed Conflict, Reconciliation and Reintegration

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## 72 Recognizable proof of WSSV envelope proteins associated with shrimp diseases

Paper ID V8I1-1390 · Pages 389-393 · Aquaculture

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White spot disorder infection (WSSV) is a significant shrimp microbe causing huge financial misfortunes. While trying to recognize the envelope proteins associated with infection contamination, antisera against six WSSV envelope proteins were utilized in balance measures led in vivo. The results showed that the infectious disease could be fundamentally postponed or killed by antibodies against three WSSV envelope proteins (VP68, VP281, and VP466). This balance was additionally affirmed by quantitative PCR. It very well may be inferred that the viral envelope proteins VP68, VP281, and VP466 assumed parts in WSSV disease to shrimp.

**Keywords:** White Spot Syndrome Virus, Envelope Protein, Antibody, Infection, In Vivo Neutralization

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## 73 Review on the phytopharmacological profile of used medicinal plant Lantara Camara (Verbenaceae)

Paper ID V8I1-1365 · Pages 394-396 · Pharmacy

**Shilpi Mishra**, Research Scholar, Shree Krishna College of Pharmacy, Sitapur, Uttar Pradesh

Lantara Camara has marvelous medicinal properties. It is very beautiful and is available in many colors. A recent study found Lantana Camara, a tropical American shrub, has invaded more than 40 percent of India's tiger range. Its species is found in more than 50 countries. The Shivalik hills, Central India, and Southern Western Ghats are the worst hit. It is also called raimonia, Ghaneri and Putus. It contains a volatile compound, due to which animals do not eat it when it is found on the side of the road. The berries found in it are very poisonous. It has been widely used in the traditional herbal medicine field to manage and even cure various common diseases. These include asthama, ulcer, cancer, leprosy, skin itches, measles, rabies, and chickenpox.

**Keywords:** Lantana Camara, Putus, Therapeutic Properties, Medicinal Plant,

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## 74 Revisiting Vedic Math for Engineering Applications

Paper ID V8I1-1392 · Pages 397-406 · Engineering

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This paper has been brought up or aimed to represent, show the importance and application of various Vedic algorithms, namely Dhawajanka sutra, Urdhavatriyakbhyam, arunanka into various branches of engineering and science such as computing, VSLI implementation, Real-time operations, Image processing, VLSI implementation of RSA encryption, Cryptography, Network Security, Discrete Fourier transform, Fast Fourier transform, ALU design, Elliptic curve cryptography, AES method cryptography, Digital Signal processing, multiplier, and Block convolution.

**Keywords:** Dhwajanka Sutra, Urdhavatriyakbyam Sutra, Arunanka Method, VLSI Implementation, RSA Encryption, Cryptography, Network Security , Discrete Fourier Transform, Fast Fourier Transform, ALU Design, Elliptic Curve Cryptography, AES Method Cryptography, Digital Signal Processing, Multiplier, Block Convolution

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## 75 Cyber security and the internet of things: vulnerabilities, threats & future of IoT

Paper ID V8I1-1401 · Pages 407-410 · Computer Science

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Internet of Things (IoT) gadgets are quickly becoming omnipresent while IoT administrations are getting inescapable. Their prosperity has not gone unrecognized and therefore the number of dangers and assaults against IoT gadgets and administrations are on the increment also. Digital assaults aren't new IoT, yet as IoT is going to be profoundly interlaced in our lives and social orders, it's becoming important to maneuver forward furthermore, treat digital safeguard in a serious way. Subsequently, there's a really got to get IoT, which has therefore caused a requirement to thoroughly comprehend the risks and assaults on the IoT framework. This paper is an endeavor to rearrange danger types, aside from dissecting and portraying gate-crashes and assaults confronting IoT gadgets and administrations.

**Keywords:** IoT, Cyber Security, Digital assaults, IoT Gadgets

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## 76 Self Redevelopment of Housing Societies

Paper ID V8I1-1408 · Pages 411-417 · Construction Management In Civil Engineering

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**Pooja Sonawane**, Assistant Professor, RMD, Sinhgad School of Engineering, Pune, Maharashtra

Around three percent of Pune city’s land possesses half the slum population. This glaring inequality is dominant at a socio-spatial level. The failure of government-incentivized market solutions to resolve the affordable housing crisis (like the Slum Rehabilitation Scheme and Pradhan Mantri Awas Yojna) is evident across Pune, except in a handful of projects. This research plans to investigate the lesser known examples in Pune, where communities have mobilized themselves to become housing providers, as a response to these market failures. A social innovation in itself, the process of Self Redevelopment involves communities coming together, registering themselves as a cooperative housing society, acquiring land and being at the forefront. Through a case by case analysis of scattered attempts of self-redevelopment in Pune, and a comparative analysis, we argue the presence and role of multiple stakeholders—like the State, private players, NGOs, activists, academicians, and certainly, the users—without whom this community-led execution shall be impossible. We hypothesize that, slum development/ redevelopment/ up gradation is successful only in places where users have been an integral part of the decision-making process.

**Keywords:** Self Redevelopment, Self Growth, Maximum Profit of the area, Timely possession

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## 77 Smart Devices and Technologies for Athletes: A Survey

Paper ID V8I1-1410 · Pages 418-426 · Computer Science And Engineering

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The survey addresses how an IOT smart device helps the athletes to monitor their Physical activities. Athletes are the one who are skilled in sports and other exercises. They take part in many sports and competitive events. It is important that every athlete should stay fit and healthy. When it comes to the health of an athlete the parameters to be considered are speed, body temperature, angle movement, oxygen level and many more physical activities. Maintaining health status and progress in games is essential. The IOT smart device which is wearable reads all the physical activities related to athlete. The device as to support both Wi-Fi and Bluetooth mesh networks. The device need to collects all the data like acceleration, angle of movement and health status of athletes during training. The IOT device also collects the real time data of athlete. The real time data collected from devices will be sent to device cloud which can be stored and can be examine in future. This survey may help the coach to keep a track and monitor the athletes who are training.as the real-time data is being stored in the cloud that can be accessed anytime from anywhere through the internet. In this paper initially the introduction is given, next to it the elaboration of some papers related to the topic are explained and so on followed by the conclusion.

**Keywords:** Athlete, IoT, Sensor, Bluetooth

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## 78 Investigation of 2-dimensional fluid flow using finite difference flow method of Navier stokes equation

Paper ID V8I1-1411 · Pages 427-432 · Mathematics

**Rakshit Kaushik**, Student, Jayshree Periwal International School, Mahapura, Rajasthan

The presented research paper illustrates the development of a new methodology to solve 2-dimensional (2D) Navier-Stoke equations, which Pukhnachev proposed by introducing unknown functions in the stream and pressure functions of fluid flow. The proposed novel method is distinguishable from the common vorticity-stream given in Navier-Stokes expression because it has a stream function that corresponds to the unknown function in the elliptic expression. The equation represents a couple of scheme in algorithmic considerations because it enables two situations to be solved using one function of the subject stream without putting new conditions on the innovative function. Here, the concept of numerical algorithm is applied in a flow under cavity to represent a benchmark task to be solved. The benchmark task gives enough representation of the subject flow.

**Keywords:** Incompressible Viscous Flow, Navier-Stoke Equations, Finite-Different Scheme

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## 79 Generation of clean energy through nuclear energy with a global perspective

Paper ID V8I1-1375 · Pages 433-441 · Science And Technology And Business Economics

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Nuclear energy is commonly defined as the energy released by a chain reaction, such as fission or fusion. Nuclear energy, in practice, generates steam and power using fuel produced from mined and processed uranium. We have more cost-effective and creative ways to harvest and store wind and solar energy but nuclear power is the only form of energy that can provide a consistent supply of electricity, which is referred to as baseload power. —reliably without emitting greenhouse gases. The thermal energy from nuclear reactors may also be used to decarbonize other energy-intensive sectors such as transportation – the largest contributor to carbon pollution. In 2019, nuclear plants operated at full power more than 92% of the time, making it the most reliable energy source. DOE and its national labs are working with industry to develop new reactors and fuels that will increase the overall performance of these technologies and reduce the amount of nuclear waste that is produced. To improve operating costs, DOE is also working with the industry to develop new fuels and cladding known as accident tolerant fuels. These new fuels could increase plant performance, allowing for longer response times, and will produce less waste. Accident-tolerant fuels could gain widespread use by 2025.

**Keywords:** Nuclear Energy, Fossil Fuels, Sustainable Energy, Renewable Source of Energy, Non- Renewable Source of Energy, Global Warming, Geothermal Energy, Biomass, Wind Energy, Solar Power, Hydraulic Power, Advanced Reactors, Small Modular Reactors, Thorium-Based Fuels, National Research Universal, Type-1 Civilisation, Pressurised Water Reactor (PWR), Uranium, Nuclear Fission

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## 80 Strategy for developing a competency model

Paper ID V8I1-1404 · Pages 442-452 · Management

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There is a trend in the industry towards competency-based approaches to the training, assessment and development of employees. The trend is evident in various disciplines and specialist areas in the field of behavioural health. A step-by-step process for developing a competency model. Models and legal implications of competency development followed by a description of the seven steps involved in creating a competency model or position. This modeling process builds on complementary work on competencies in business and industry. The aim of this study is to develop a personalized competency model for a knowledge-based organization. A competency model is a company-wide framework and descriptive tool that identifies the competencies required to perform effectively in a particular job, occupation, industry, or organization. These are the built-in knowledge, skills, judgment, and qualities people need to do a job effectively. By having a defined set of competencies for each role in your company, you show employees the types of behaviours that the organization values and needs to help you achieve your goals. It is a quantifiable list of knowledge, skills, and traits demonstrated through individual behaviour that leads to excellence in a particular work context. This document is designed to provide a step-by-step process for developing a model of competition. The overview of

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competencies, competency models and the implications of competency development is followed by a description of the seven steps for creating a competency model for a specific function, role or position. This modelling process is based on advanced work on competencies in business and industry. A special competence model has been developed for employees working in management. The employees were mapped with the competence model developed for their current vis-à-vis competencies. contributes to original research by providing a starting point for solving the full spectrum of HR activities to improve organizational effectiveness in R & D environment. It adds to the practice as the model developed can be applied to similar organizations.

**Keywords:** Knowledge-Based Organization, Competence, Model

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## 81 The trends in developing businesses globally

Paper ID V8I1-1399 · Pages 453-454 · Article

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Today Corporate Insider Intelligence and several eMarketer’s are progressing at a higher rate. Through this article, readers can have better learning of the current situation of businesses globally and their changing operation trends during this Covid-19 pandemic. The article further proceeds by evaluating the case studies with a high growth perspective and technological innovations. The article seeks relevance through checking the probability of business replicas and planning strategies for the next few years to combat the situation.

**Keywords:** Strategic Development, Management Sciences, and Supply Chain

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## 82 News aggregator web application

Paper ID V8I1-1418 · Pages 455-457 · Computer Science

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News Aggregator is a web app that collects and displays all of the latest news stories and events happening around the world in one place. It helps reduce time consumption. One other thing to do is to provide a few lines of text to summarize the article. This paper presents a system that collects news from various electronic publishers and distributors.

**Keywords:** News Aggregator, Web App, Python

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## 83 A critical analysis of how learning and development affects employee motivation and performance in an organization

Paper ID V8I1-1416 · Pages 458-465 · Learning And Development

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In today's fast-paced, competitive world, learning and development have become crucial aspects for every organization. A great organization is distinguished from a good one by its human capital and their unique competencies. Organizations that engage in excellent human resource training and development reap both immediate and long-term rewards. Due to organizational, technical, and social dynamics, employees tend to become obsolete, making the need to adapt to constant learning environment and upgrading of skills and knowledge vital. The given research is an attempt to understand different perspectives on how learning and development is important in organization’s today and how it tends to affect performance of an employee in a positive or a negative way. This research is divided into two parts; First part provides an overview and perspective of the Employees towards how Learning and Development helps in employee productivity. The number of participants was 107; method used was snowball sampling and instrument used was a structured questionnaire. Employees who were working in an organization for the duration of one year or more were taken into consideration. The second part consist the views of 8 Human resources professionals who have been engaged with the same organization for a minimum duration of two years. Their responses were taken into account with the help of semi-structured interviews which were further analysed using the method of content analysis. Furthermore, a comparison was drawn between the views of the employees and the HR professionals to bring out the contrasts and similarities of the opinions on this phenomenon.

**Keywords:** Employees, Productivity, Learning, and Development, Organization

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## 84 Fasting for husband’s long life: A study of Hindu women living in Dhangadhi Sub-Metropolitan City, Kailali District

Paper ID V8I1-1355 · Pages 466-470 · Sociology

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Fasting has been undertaken for spiritual or religious reasons throughout history. No matter what, whether it is “Teej,” “Sarwan-Brata” “Karva-Chauth” or any other special occasion, a Hindu woman fasts for her husband to live long. Fasts “Vrata” or “upavasa” is a centuries-old tradition observed annually in Nepal, and girl children follow their mother’s and grandmother’s footsteps without questioning the matters of fact. For fasts, usually, Hindu women wake up before dawn to begin a fast at sunrise, take a bath, put on clean clothes, not eat or drink until evening. For a long time, I was constantly preoccupied with the question of fasting and did not get a rational answer, so I have decided to explore why Hindu women pray for love and long lives for their husbands in Nepal? Does fasting extend the life of the husband? To know the proper answer, I had been through religious

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scriptures, reviewed scientific research articles, interviewed a few priests and women who have fasting experience. Based on research findings, fasting for the husband may or may not bring longevity to the husband's life, but scientific research articles reported that fasting is good for detox and builds health and immunity for those who are fasting. In addition, not eating is the key to losing weight. Based on statistics from 2009 to 2019, the life expectancy at birth for women in Nepal was about 72.21 years, and the life expectancy at birth for men was about 69.26 years on average. The concluding remark is that fasting for a husband's long life may or may not extend the husband's life, but it extends the healthy life of those who fast.

**Keywords:** Fasting, Hindu, Culture, Religion, Long-Life, Health

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## 85 Student-alumni network web app

Paper ID V8I1-1413 · Pages 471-473 · Information Technology

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Alumni are the most important asset for an institution's development so an efficient alumni network system is needed. The existing alumni system is not highly interactive and is error prone. The proposed system will help alumni and the concern institution to create strong bonding through sharing their experiences, views, ideas, guidance, motivation inputs and strategies. Not only this, under this work the student and alumni are brought under one system so that the collaboration and communication between them is more and results in the institution's development. The design is engaging and ensures user satisfaction. Latest in demand technologies are used in this system.

**Keywords:** Students, Alumni, Alumni Network, Connection, Institute

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## 86 Gender and age detection

Paper ID V8I1-1385 · Pages 474-478 · Computer Science

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This project is about gender and age detection. Nowadays, age and gender classification are being used in many applications like human-computer interaction, biometrics, video surveillance, forensic, etc. The main objective of this project is to compare the image with the reference images stored as templates in the database and to check how approximately it gives the accuracy by detecting the age and gender. The age and gender are detected by giving the picture and video file as input. It is used on the basis of deep learning and successfully applied to the image classification area. Gender and age detection from images of human faces and also the video is an essential part of our method for anomalous human behavior.

**Keywords:** Gender, Age, Streamlit, Python, CNN

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## 87 Indian sign language interpreter

Paper ID V8I1-1257 · Pages 479-482 · Machine Learning

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Hand gestures which are a form of non-verbal communication are a strong way to communicate with a hearing-impaired community. It helps to establish human-computer communication. The purpose of this project is to help the dumb and deaf people for ease in communication as this project will help us to understand their sign language to some extent as both hands are used for performing any gesture and this will eventually help them to communicate with others. Image classification is done using neural networks. The task is accomplished using Machine learning and Image classification. InceptionV2 model with feature vector is used to train the dataset of around 10000 images in total and 300 images of each sign which gives the optimum accuracy.

**Keywords:** ASL, Tensorflow, OpenCV, Image processing, Deep learning

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## 88 Stress of COVID-19 on dental postgraduates of India – A questionnaire-based survey

Paper ID V8I1-1428 · Pages 483-488 · Dentistry

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The rapid, sudden and extensive spread of the COVID-19 pandemic has become a major cause of concern for the healthcare profession. Dentists and dental students are at the highest risk of infection. This questionnaire-based study aims to assess the stress level because of COVID-19 disease and related infection among dental postgraduate students in various states of India. It was concluded that dentists or dental students are more anxious and fearful about COVID-19 because of the loss of academic and clinical hours along with high-risk infections during clinical procedures.

**Keywords:** Stress, Dental, Postgraduates, Coronavirus

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## 89 Availability and utilization of teaching resources for effective computer science education for youth empowerment in Anambra state

Paper ID V8I1-1422 · Pages 489-493 · Computer Science

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**Nwankwo Ugochukwu Cornelius**, Lecturer, Caritas University, Amorji-Nike, Enugu, Nigeria

This study was an assessment of the extent of availability and Utilization of Teaching resources for effective Computer Science Education in the Technical Colleges of Anambra State. To carry out the study, two research questions and a Null Hypothesis was formulated. The data were analyzed using Mean, standard deviation and z-test respectively. A questionnaire with 45 items were developed and used for collecting data from the respondents. The population of the study was 534. A sample size of 300 respondents was obtained using stratified random sampling techniques comprising of 215 vocational students and 85 technical teachers in four technical colleges of the state. A reliability test was conducted using Pearson (r) product moment correlation co-efficient and the instrument yielded an internal consistency of 0.69. Results showed among other things that teaching resources like Audio, Printed and non-projected teachings and worksheets were not available. Extent of utilization of teaching resources indicates that Audio, Computer Mediated teachings and non-projected display teachings were not utilized in the teaching and learning in the technical colleges. Based on the findings, recommendations were made as; teaching resources should be provided in all the departments in the technical colleges for effective teaching and government should monitor utilization of teaching resources in all the technical colleges to enable the youths pass out with skills for self-employment.

**Keywords:** Utilization, Resources, Technical

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## 90 Jocata Grid: To study Artificial Intelligence (AI) used for fraud detection and reduction in False Positive

Paper ID V8I1-1423 · Pages 494-498 · Fintech

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Fraud detection in today’s arena presents numerous challenges since fraud instances are present in all sources and walks of life. Technological innovations have always proven a boon for the Financial Crime and Compliance Industry with the ascent of big data and man-made consciousness, new freedoms have emerged in utilizing progressed AI models. With renewed promises to fight frauds and other financial crimes, it is imperative to look at intelligent solutions that can prevent and detect internal fraud. With regulators encouraging the use of advanced technologies like analytics, machine learning (ML), and other forms of artificial intelligence (AI) in managing FinCrime risks. We summarise our findings in the research for a reduction in False Positives and to increase the efficiency of fraud detection and conclude by deriving key values created and captured from our analyses.

**Keywords:** Fraud, Financial Crime, Big-data, False Positive, and Artificial Intelligence

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## 91 Study of Anita Desai’s novels- A new perspective

Paper ID V8I1-1402 · Pages 499-501 · English Literature

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Studying the novel as an expressive style enjoyed the highest level of glory in the 18th century. The term ‘novel’ derived from the Italian word ‘ novella’ was first used for each of a collection of about one hundred narratives that appeared in the later half of the 13th century. The very term ‘novel’ means something new. The novel's last literary form is to come into being among the major forms of literature, the other two being Prose and Drama. A ‘novel’ is a sustained story that is not historically true but might very easily be so. The novel has been made the vehicle for satire, for instruction, for political or religious exhortation, and for technical information. Its plain and direct purpose is to amuse by a succession of scenes painted from nature and by a thread of the emotional narrative.

**Keywords:** Novella, Satire, Emotional, Nature, Satire, Fiction

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## 92 To Study Impact of Organizational Culture on Employee’s Job Satisfaction and Performance – A Case Study on Manufacturing Industry

Paper ID V8I1-1441 · Pages 502-505 · Human Resource

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The research was designed to examine the impact of organizational culture and its impact on employee performance and job satisfaction, using the organization “Orient Bell Ltd” as a case study. The objectives of the study were to evaluate how organizational culture influences employee performance and job satisfaction and the relationship between organizational culture, employee performance and job satisfaction in order to proffer possible solutions that will help organizations to build a culture that will have a positive impact on the performance and satisfaction of their employees. The data for the research was obtained from respondents who were mainly staffs of Orient Bell Ltd. The data was analyzed using tables and chi square was used in testing the hypotheses formulated to guide the research. From the findings, it was observed that majority of the respondents agree that organizational culture does have an impact on performance and satisfaction levels of employees. It was also discovered that the type of organizational culture practiced in an organization can also determine the level of employee performance and job satisfaction.

**Keywords:** Organization Culture, Organizational Goal, Employee Performance, Job Satisfaction, Employee’s Commitment.

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## 93 Impact of training and development on employee's performance

Paper ID V8I1-1443 · Pages 506-510 · Managment

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Training and development can be seen as a means to a goal. It aids a business in achieving its ultimate goal, which is to raise the happiness quotient of its people, resulting in an excellent performance, quality production, and a healthy organization. Healthy businesses have higher staff retention which improves the company's image and helps it acquire goodwill in the market. It functions as bridging the gap between competence and performance. Employee satisfaction depends on training and development. Human resource management is the most difficult challenge a business has and training and development appear to be the best alternative for dealing with and resolving this issue. The goal of this study is to investigate various training techniques, determine employee attitudes towards training. The study revealed that the employees strongly agree that training is a must for enhancing productivity and performance. The study suggests that organizations should be made training programs available and made it compulsory to lower the expense of recruiting new employees.

**Keywords:** Training, Development, Employee, Performance, Training Methods

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## 94 Sustainable irrigation planning for JOBAT Command Area using Multi Objective Fuzzy Linear Programming approach

Paper ID V8I1-1445 · Pages 511-516 · Civil Engineering

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In this study, an irrigation planning model is developed and applied in form of Multi-Objective Fuzzy Linear Programming (MOFLP) approach for crop planning in the command area of the Shahid Chandra Shekhar Azad Sagar (Jobat) in Dhar District of Madhya Pradesh, India. The formation of the MOFLP model is based on different Linear Programming (LP) models and Multi-Objective Fuzzy Linear Programming (MOFLP) models. Here models are used to maximize the Net Benefits (NB) and Crop Production (CP). The cropping patterns giving the best result for the Crop Production and Net-Benefit are different. The Area Under Irrigation is 0 for gram when just Crop Production is optimized. Similarly, when only the Net Benefit is optimized, the Area under irrigation is 0 for sugarcane because of the low value of the benefit coefficient. So, we find Optimal Cropping Pattern for the Crop Production and Net-Benefit by LP and MOFLP at different live reservoir storage

**Keywords:** Fuzzy Linear Programming, Water Requirement, Crop Production

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## 95 A study on challenges faced by women entrepreneurs in India

Paper ID V8I1-1452 · Pages 517-520 · Women Entrepreneurs

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India's economy is one of the world's fastest-growing. The number of start-ups launched has been steadily increasing over the last decade. The vast majority of these have been started by men. The good news is that women have shown a strong interest in entrepreneurship and starting new businesses. The issue is that women's success rates are considerably lower than men's due to a variety of cultural factors like fear, lack of motivation, as well as a lack of commercial resources such as development and training. Women, in general, are for the most part seen as domestic producers with small to do with economy or commerce. The theme of ladies in business has been largely neglected both in society in general and within the social sciences. For occurrence, in spite of the fact that ladies have made gigantic strides in instruction in later years, such as outperforming men within the number of degrees allowed, they are still underrepresented in areas like building and computer science, which are the establishments for so much entrepreneurial action. Additionally, while women have held increasingly parts in organizations, they've been less spoken to within the sorts of positions that "involve senior-level key arranging and need setting." This paper has been made to ascertain the challenges faced by women entrepreneurs in the process of setting up and managing the business in a business environment. We have used secondary data to do this research paper.

**Keywords:** Associations, Challenges, Initiatives taken by The Government, Women Entrepreneurship

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## 96 "Kachre se kanchan tak" A Novel idea of Maha-Metro Rail Corporation (Pune Metro Rail Project) that has reclaimed the dumpsite legacy waste and reused the received soil in backfilling to conserve the virgin soil resource

Paper ID V8I1-1450 · Pages 521-525 · Legacy Waste Management (solid Waste Management)

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Land is scarce commodity in urban context. It is estimated that more than 10,000 hectares of urban land is locked in Indian dumpsites. Pune Metro Rail Project has been allocated one of such dumping site (Kothurd) to construct the depot for serving the East-West Corridor. The land area of Kothurd dumping site spreads over 12.2 hectares and predominantly filled with Municipal Solid waste heaped in 10 to 12 meters height, home for pigs, stray dogs and rodents. This area is also surrounded by the residential /commercial complex posing an environmental hazard to nearby residents. This article presents that how Maha-Metro, Pune Metro Rail Project has reclaimed a three decades-old garbage dumpsite with in-house effort and converted into state of art depot and unencumbered all nearby residents from ill effects of dumping site. Reclamation of kothurd dumpsite having huge quantities of decades-old garbage (aged waste or legacy waste) in an environmentally sound manner was a challenge. Maha Metro Pune Metro Rail Project took this challenge and formulated strategy for reclamation of this dumpsite. The emphasis was to conserve the virgin soil resource and to maximum reuse of

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earth soil to meet the backfilling requirement at various ongoing Metro Construction sites. Environment Management Division (EMD) of Pune Metro Rail Project has conducted some primary studies to understand the waste composition, organic content etc. and visited Mulund dumping site on 30.4.2019 to understand the aged/legacy waste reclamation process prescribed under Municipal Solid Waste Management Rules 2016. Primary studies on compositional analysis reveals that legacy waste consist 14 % biodegradable material, 39% recyclable (RDF- Paper card board, textile rags, plastic, rubber etc.). 8% recyclable (Non-RDF- glass metal etc.) and 39% Inert Construction & Demolition material. However, organic analysis of the waste reveals that waste was fully degraded and converted into soil like compost through natural process. The heavy metal analysis of legacy waste indicates that all the parameters are within the permissible limit (Schedule II, SWM Rules 2016) and could be effectively reused in gardening, landscaping, green belt development and median plantations. Further, the possibility of using the received soil in back filling was also explored and a lab test was carried out to understand the quality of soil. The result reveals that soil is meeting the quality criteria of IS standards can be effectively reused in backfilling at various ongoing Metro construction sites.

**Keywords:** Kachra Depot, Open Dumps, Aged/Legacy Waste, Environmental Hazard, Backfilling

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## 97 The sustainability of US debt

Paper ID V8I1-1451 · Pages 526-530 · Finance And Economics

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US debt is a matter discussed worldwide, owing to the widespread use of the US dollar and the global economic power that the US holds. A large proportion of trade relies on the dollar, and many currencies are even pegged against the dollar. This has meant that global demand for the dollar has been constant. Furthermore due to a range of factors interest rates have remained extremely low, therefore the government has been able to borrow large amounts of debt and satisfy creditors. However, owing to the pandemic, unprecedented spending, tax cuts, and an unproductive spending plan the US government's fiscal position is slowly deteriorating. With uncertainty growing, the inevitability of tapering setting in, and rising inflation looming, the US economy must reconsider its spending patterns or cut back on current spending, both of which could lead to long-term social consequences. This paper discusses the current position of the government and its sustainability through various perspectives such as the ability to satisfy this debt in the future, growth hindered by debt through a neoclassical growth mode, unfunded obligations, and the effect of angst and defaults. On the contrary, it also explores how low-interest rates and the global strength of the dollar have made its position more sustainable than other countries. Finally, there are also proposals to help strengthen the government’s fiscal position, and long-term solutions to ease the situation and help the economy recover. These when implemented would not solve the crisis at once given its gravity but at least stabilize the government for the time being. Finally, after analyzing collaborating this diverse range of analyses, proposals, and information this paper proposes a concrete synopsis of something that could inevitably shake global markets and affect communities and countries at even an individual level.

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**Keywords:** Unfunded Obligations, Stimulus, Outlay Payments, Social Security, Gini Coefficient, Neoclassical Growth Model, Disposable Personal Income, Credit Rates, Treasury Bills, Yield, Default, Debt-To-Gdp, Inflation, Interest-Rates, Real Interest-Rates, Real Gdp, Is-Lm Model, Taper, Phillips Curve, Income Security, Say's Law, Consumer Credit, Productivity

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## 98 A survey on asynchronous distributed Federated Learning framework

Paper ID V8I1-1463 · Pages 531-540 · Information And Communication Engineering

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Through the hasty growth of data generated by intelligent IoT devices, Federated learning (FL) seems to be a promising technique that provides distributed Machine Learning (ML) amenities at the same time protecting data privacy. FL is the novel form of Artificial intelligence (AI) that builds on decentralized data setup and carries out training that brings learning to devices. It’s mostly used in instances that involve security and privacy as the main concerns and empowers implementers to build secure learning environments. The federated averaging (FedAvg) is one the most used optimization algorithms that train models with a synchronized protocol. However, the algorithm is not realistic enough and communication efficiency issues tend to arise. The amount and distribution of collected data have a different training process because of varying sample sizes of devices. This paper carries out an in-depth review of FL and its asynchronous learning previous research. Lastly, the authors propose a privacy-preserving asynchronous FL framework for distributed healthcare care data that improve the model accuracy to health information. Although the framework is still being implemented it aims at guaranteeing improved communication amongst healthcare industry participants such as hospitals, clinics, laboratories, pharmaceuticals, and many more facilities.

**Keywords:** Artificial Intelligence (AI), Federated Averaging (FedAvg), Federated Learning (FL), Machine Learning (ML)

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## 99 Effect of COVID-19 on employees’ work-life balance at Swastik pulp and paper mill

Paper ID V8I1-1462 · Pages 541-545 · Management

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In this report we have researched how the employees have balanced their work, as well as their routine life as we know the situation was very worst but earning, was also essential, therefore the company has given work from home to many employees. In work from home, many employees have enjoyed as they can do work at any time and they can enjoy other activities as well side by side. But because of that, the output was very muchless as compared to work from the office and many employees were bored as well because they have to workfrom one place only and they don’t have to go anywhere. So sometimes they were also mentally pressured.

**Keywords:** COVID-19, Physical Wellbeing, Pandemic, Mental Wellbeing, Employee, Work From Home

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## 100 Development of an android-based visual implementation of student project allocation system

Paper ID V8I1-1470 · Pages 546-551 · Android

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Technology is every place we go in a moment's life. So, scholars of seminaries or sodalities, or universities bear an operation that supports smartphones to get all types of information related to examination, lecture notes, placement, systems regarding the announcement, events, transportation, etc. Rather than calling systems because nearly all mobile druggies have smartphones currently. This being system takes a pupil list and allocates administrators to scholars. Using a manual system in the management and allocation of projects to students is characterized by many problems, including the Inability of the project Guide to know that a title has been approved already for a student. Difficulty and inappropriate documentation of allocated project topics. Ineffective in entering, updating, and retrieving records of allocated projects. Difficulty in accessing the project Guide for approval of the topic. Duplication in project topics approved for students. We designed an operation to attain the demand of scholars. The main idea of the pupil design allocation system is to make a system that will give information for each pupil. Projects can efficiently be allocated to students without delay, and topic conflict between students in the same department will not arise here. Pupil updates can be fluently penetrated if the database system is enhanced. This design will give a fruitful way to manage data at a low cost. The Student Project Allocation contains colorful options similar to login/ logout, viewing and streamlining data, etc. It'll be secure. Data can be used by only those with an id and word while maintaining the data.

**Keywords:** Android Studio, Java

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## 101 Awareness regarding cryptocurrency among investors

Paper ID V8I1-1461 · Pages 552-555 · Finance

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The research was designed to perceive the awareness of the Investors regarding CryptoCurrency. The Objective of the research is to observe the perception of cryptocurrency in terms of gender and whether awareness of cryptocurrency and gender are dependable variables; To find out people's preference about cryptocurrency, their trading preference there preferred cryptocurrency, and what they think as an advantage, disadvantage and important factors about cryptocurrency; To study the perception of investors regarding the acceptance of bitcoin as mode of cashless transaction. The data for the research was obtained through the Survey method, based on the Questionnaire, circulated in the form of Google Forms online. The data was analyzed using tables and chi-square was used in testing the hypotheses formulated to guide the research. The outcome of the testing proved that the awareness of cryptocurrency and gender are dependable variables and the male respondents was having more knowledge and awareness of crypto in comparison to female respondents. At the same time, the data help out to understand the preferences of the people and their perception regarding the acceptance of bitcoin as a cashless transaction.

**Keywords:** CryptoCurrency, BitCoin, Cashless Transaction, Awareness, Gender Differences

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## 102 Analysis of vandhya rog chikitsa from yogaratnakar on the basis of modern and ayurvedic text: A review

Paper ID V8I1-1359 · Pages 556-561 · Medical

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Ayurveda is a science which is having its own diagnostic methods and treatment based on it. Ayurvedic classical texts elaborate treatment of Vandhytva (infertility), in almost all important Samhitas. In present scientific research, many causes of infertility are explored because of the vast availability of diagnostic tools. In the period when Samhita's were written the diagnostic methods are very different, so when acharya cite the treatment, it was quoted that the treatment is useful in infertility, as a general term. It is need of an hour to analyze this ancient treasure of treatment in terms of modern scientific knowledge. This effort will help a clinician to find the absolute indication of the infertility treatment. In this analytical study the infertility treatment mentioned in Yogratnakar, (one of the classical texts) is critically evaluated to find out the absolute indication. The chapter from Yogaratnakar namely “Yonivyapada Roganam Chikitsa, Vandhyarog Chikitsa” is critically analyzed. It is observed that the formulations which are evaluated are having estrogenic action, potent aphrodisiac, endocrine stimulants, so they are useful in unovulation, tubal block, luteal phase defect, disorders of the endocrine system also in defective spermatogenesis.

**Keywords:** Vandhyatva, Infertility, Yogaratnakar

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## 103 Clustering Algorithms and Classification Method for the Analysis of the Crop Yielding Dataset

Paper ID V8I1-1439 · Pages 566-569 · Artificial Intelligence

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Prediction of the crop is a dominant element of agriculture and even for farmers[1]. Currently, India is in the second position in the world for agricultural produce. The main economic sector of India is agriculture, which plays an important role in the growth of the economy[1]. Prediction of a crop is a challenging issue, so comprehensive varieties of crop prediction methods are used. In this paper the essential data is collected from districts of Karnataka and Tamilnadu with many parameters like year, district, area, temperature, rainfall, crop, and yield in tons for the year 2005 to 2016. For crop prediction, methods like K-Means and the J48 algorithm are applied in the existing system for clustering and classification. In the proposed system for clustering, the PAM (PartitionaroundMedoid) is applied and for classification, J48 is applied. A dataset is collected and clustered as stated by the attribute of the PAM algorithm by using the Euclidean formula, calculatingthe distance between the points. In this work tools like eclipse mars.2 and the programming language, Java is applied. The result acquired through an existing algorithm such as K-Means & J48 in comparison with a proposed algorithm like PAM and J48 gives better results in terms of accuracy and time complexity.

**Keywords:** Crop Prediction, Clustering, Classification, K-Means, PAM, j48

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## 104 Transfer learning-based machine learning models for heart disease prediction in an earlier stage

Paper ID V8I1-1473 · Pages 570-575 · Machine Learning

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Anticipating and identifying heart affliction has ordinarily been an intense and tedious task for specialists. To adapt to heart problems, medical clinics and explicit centers are giving steeply-evaluated rebuilding procedures and activities. Thus, hanging tight for a heart disorder in its initial degrees is most likely valuable to individuals from one side of the planet to the other, allowing them to take required treatment ahead of time before it transforms into genuine. Heart ailment has been the main issue in state-of-the-art years, with the essential intentions being unreasonable liquor use, tobacco use, and an absence of actual work. Machine gaining knowledge has proven to be beneficial in making selections and predictions from a huge set of information created via way of means of the healthcare enterprise over time. Artificial neural networks (ANN), choice trees (DT), random forests (RF), and Naive Bayes) are a number of the supervised gadget gaining knowledge of strategies hired on this prediction of coronary heart ailment (NB).In addition, the results of various algorithms

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are summarized. This paper attempts to forecast cardiac disease at an early stage. We will compare the four algorithms with their accuracy score and will conclude which algorithm is best.

**Keywords:** Heart Disease, ANN, Coronary Artery Disease(CAD), Random Forest, Decision Tree, Naive Bayes

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## 105 Density Functional Theory (DFT) simulations on fullerene/polymer blends for organic photovoltaic systems

Paper ID V8I1-1466 · Pages 576-586 · Computational Chemistry

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This research uses computational simulations using SIESTA (Spanish Initiative for Electronic Simulations with Thousands of Atoms) package based on Density Functional Theory (DFT) to explore the free energies, interaction energies, relative stability, stability of bonds, and charges transfer abilities of Organic Photovoltaic (OPV) systems comprising of bis[methano- fullerene (6,6)-phenyl-C61-butyric acid methyl ester] (bisPCBM) as the acceptor and eight different donor polymers. The novel donor polymers are computationally designed based on poly[4,8-bis-substituted-benzo [1,2-b:4,5-b']dithiophene-2,6-diyl-alt-4-substituted-thieno[3, 4-b]thiophene-2,6-diyl] (PBDTTT) polymer, the main structural changes being the incorporation of Se and F atoms. From the results, it was clear that PCBM makes a wiser choice as the donor compared to bisPCBM for computer simulations. The influence of F atoms was observed in the stability of the system both energetically and structurally. The incorporation of Se negatively affects the feasibility of acceptor-donor interaction.

**Keywords:** Density Functional Theory (DFT), Organic Photovoltaic (OPV), Fullerenes, Thiophens, SIESTA

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## 106 Automated Soil Nutrients Monitoring and Irrigation using IoT

Paper ID V8I1-1475 · Pages 587-592 · Electronics And Communication

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The process of cultivating crops along with livestock raising termed agriculture is one of the fields in this world that need more accurate and advanced technologization. Agriculture is the most crucial part of every individual's daily life and has been in existence for thousands of years, and still isn't at the expected peaks of technology. Making agriculture smart and advanced may upgrade the level of agricultural technologization to a certain peak. It will have positive ef ects on the yield of crops and also decrease the manual labor that is put into them. More accuracy and precision will be provided while farming and thus proving to be an ef icient way of farming. In earlier days, water level, humidity level, moisture condition, pH condition was not a great point of focus by the farmers and hence the produce was also not always up to the maximum possible. But as a

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researched fact, these above-mentioned condition plays a vital role in increasing productivity and healthy farming. IoT had played a role of importance in the development of smartness, accuracy, and precision in smart farming. And newly evolved technologies will also in support of IoT help take the advancing level of agriculture to its new heights. In this report, a model has been proposed that aims at smart farming with the help of a sensor network, which helps in detecting soil nutritional level with pH values, moisture of soil using moisture sensor, and temperature using suitable temperature sensor. Also, an automated irrigation system will be implemented using AWS cloud computation.

**Keywords:** IoT, Automated Irrigation system, pH sensor, Moisture sensor, Nutritional Value of soil, AWS cloud

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## 107 Students' perceptions towards entrepreneurship education for self-employment, job creation, and job-seeking intentions in national polytechnics in western Kenya

Paper ID V8I1-1168 · Pages 593-599 · Vocational Education

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This study investigated the perceptions of entrepreneurship finalist students towards entrepreneurship education for self-employment, job creation, and job-seeking intentions in National Polytechnics in western Kenya. Theory of Planned Behaviour by Ajzen (1991). This theory links one's beliefs and behavior. Using a quantitative approach, the study adopted a descriptive survey research design, and data was collected from all 273 entrepreneurship diploma students using questionnaires in Uasin Gishu and Trans Nzoia Counties. The researcher used a simple random sampling technique to select two National polytechnics out of five National polytechnics in Western Kenya, purposive sampling procedures to select students (level of study). Data were analyzed using SPSS version 21 where descriptive and inferential statistics were performed. The study revealed that: Students have a positive perception towards entrepreneurship education and they agreed that it influences their self-employment and job creation intentions and the entrepreneurial background of students influences their self-employment and job creation intentions. The study recommends that entrepreneurship education tutors should use active methods that cultivate an entrepreneurial culture among students and the Kenya institute of curriculum development should work closely with curriculum implementers to review the entrepreneurship education syllabus to make it more practical oriented and ensure that it is fully implemented and evaluated so as to enhance venture into entrepreneurial activities to create jobs for others as well as being self-employed.

**Keywords:** Perceptions, Entrepreneurship Education, Students' Self-Employment, Job Creation, Job Seeking Intentions, National Polytechnics

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