SOUVENIR OF THE

INTERNATIONAL CONFERENCE

ON

"CHALLENGES & OPPORTUNITIES FOR INNOVATION IN INDIA"

(COII – 2024)

(23RD & 24TH FEBRUARY, 2024)

AMBALIKA INSTITUTE OF MANAGEMENT & TECHNOLOGY

AIMT

LEARNING WITHOUT LIMITS

AMBALIKA INSTITUTE OF MANAGEMENT AND TECHNOLOGY, LUCKNOW

(AKTU College Code: 363)
Maurawan Road, Mohanlalganj, Lucknow.
Uttar Pradesh, Pin Code: 226301
Website: www.aimt.edu.in

Dr. A.P.J. Abdul Kalam Technical University
Lucknow, Uttar Pradesh, India

In Association With
Computer Society Of India,
Lucknow Chapter

INTERNATIONAL CONFERENCE
Challenges & Opportunities For Innovation in India (COII)

Souvenir of the

INTERNATIONAL CONFERENCE

On
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Ambalika Institute of Management and Technology, Lucknow,
(AKTU College Code: 363)
Maurawan Road, Mohanlalganj, Lucknow
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Website: www.aimt.edu.in

INSTITUTION'S INNOVATION COUNCIL
(Ministry of Education Initiative)

MoE's INNOVATION CELL
(GOVERNMENT OF INDIA)

Souvenir of the Ambalika Institute

Of

Management and Technology, Lucknow (India)

(AKTU College Code: 363)

Maurawan Road, Mohanlalganj, Lucknow, Uttar Pradesh Pin Code: 226301,
Website: www.aimt.edu.in

Organized A

INTERNATIONAL CONFERENCE

On

"Challenges & Opportunities for Innovation in India"

(COII - 2024)

23rd- 24th February, 2024

ISBN : 978-81-966262-5-9

Ambalika Institute
Of
Management and Technology, Lucknow (India)

VISION & MISSION

Vision

To nourish the students, blossom them into tomorrow's world class professionals and good human beings by inculcating the qualities of sincerity, integrity and social ethics.

Mission

1. To provide the finest infrastructure and excellent environment for the academic growth of the students to bridge the gap between academia and the demand of industry.

2. To expose students in various co- curricular activities to convert them into skilled professionals.

3. To grind very enthusiastic engineering and management student to transform him into hard working, committed, having a zeal to excel, keeping the values of devotion, concern and honesty .

4. To involve the students in extracurricular activities to make them responsible citizens.

Anandiben Patel
Governor, Uttar Pradesh

सत्यमेव जयते

Raj Bhavan
Lucknow - 226 027

16 February, 2024

Message

I am glad to know that Ambalika Institute of Management and Technology, Lucknow is organizing an international conference on 'Challenges and Opportunities for Innovation in India (COII-2024)' on 23rd and 24th, February 2024. To mark the occasion a souvenir will also be published.

Under the present day scenario when India is playing an important and leading role in world affairs, innovations are underlining feature for sustainable development. I hope this event will provide vibrant platform to academicians, industry persons, research scholars, students and delegates to share their views and shall go long way in the development of the country.

I extend my best wishes for successful publication of the souvenir and a grand success to the international conference.

Anandi Patel

(Anandiben Patel)

Brajesh Pathak
Deputy Chief Minister

Medical Education, Medical Health &
Family Welfare, Mother and Child Welfare
Government of Uttar Pradesh
Office Room No. 99, 100, Main Building,
Vidhan Sabha Sachivalaya
Phone 0522 2238088 / 2213272 (Off.)

Date 13-02-2024

Greeting Message

I am immensely happy to know that Ambalika Institute of Technology, Lucknow is organizing International Conference of Challenges & Opportunities for Innovation in India from 23rd & 24rd February, 2024.

India is in need of progressive and innovative ideas in technical education. The institute is giving chance to young blood to show its strength and this conference will definitely make a big difference to new and innovative ideas of all the researchers.

I appreciate the Institure for this incredible step and congratulate too for that International Conference.

My heartily wishes for a grand success of this conference.

(Brajesh Pathak)

9, Raj Bhawan Colony, Lucknow-226001 Ph. 0522-2239999 (Resi.)

आशीष पटेल
मंत्री
प्राविधिक शिक्षा एवं उपभोक्ता मामले
उत्तर प्रदेश

अ.शा.प.सं. ..... वीआईपी/मं0प्रा0शि0उ0मा0/24
विधान भवन, मुख्य भवन, कक्ष सं. 86, 87
दूरभाष : कार्यालय : 0522–2238124
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दिनांक : 15/02/24

Message

I am happy to know that Ambalika Institute of Technology, Lucknow is organizing International Conference of Challenges & Opportunities for Innovation in India from 23rd & 24rd February, 2024.

Need of progressive and innovative ideas in technical education. The institute is giving chance to young blood to show its strength and this conference will definitely make a big difference to new and innovative ideas of all the researchers.

I appreciate the Institute for this incredible step and congratulate too for that Conference.

My heartily wishes for a grand success of this international conference.

(Ashish Patel)

Mr. Ambika Mishra
Executive Director
AIMT, Lucknow

Pramod Tiwari
Member of Parliament
Rajya Sabha
Member, Congress Working Committee

17, Teen Murti Marg
New Delhi-110011
Mob.: +91-9711247000
Tel. No.: +91-11-23017727

Message

I am very happy to learn that Ambalika Institute of Management and Technology, Lucknow is organizing an International conference on **"Challenges and Opportunities for Innovation in India (COll-2024)" from 23rd & 24th , February 2024.**

Ambalika Institute of Management and Technology, Lucknow has gained an important position in the field of education and extended plethora of opportunity in the field of technology and management in recent times.

I hope that this conference will go long way in contributing to serve our state and nation at large.

I wish all the luck and success to college management and faculty members for this whole event.

With Regards,

Yours Sincerely,

(Pramod Tiwari)

4, Lal Bahadur Shastri Marg, Lucknow, Uttar Pradesh-226002, Tel. No.: +91-522-2239841
2, Elgin Road, Civil Lines, Prayagraj, Uttar Pradesh-211001, Tel. No.: +91-532-2404032
Email : pramodtiwari.mprs@sansad.nic.in | pramodtiwari17000@gmail.com

प्रो० जय प्रकाश पाण्डेय
कुलपति
Prof. Jai Prakash Pandey
Vice Chancellor

डॉ० ए०पी०जे० अब्दुल कलाम प्राविधिक विश्वविद्यालय
उत्तर प्रदेश, लखनऊ
Dr. A.P.J. ABDUL KALAM TECHNICAL UNIVERSITY
Uttar Pradesh, Lucknow

Dated : 31.01.2024

MESSAGE

I am thrilled to extend my warmest congratulations to each and every one of you for the outstanding success of the COII 2024 hosted at Ambalika Institute of Management and Technology, Lucknow. Your unwavering dedication, meticulous planning, and collaborative efforts shall undoubtedly make this event a resounding success.

This conference shall not only showcase the intellectual prowess within your institution but shall also provide a platform for the exchange of innovative ideas, cutting-edge research, and profound insights in the field of Innovations.

I would like to express my gratitude to the organizing committee for their tireless efforts in ensuring the seamless execution of the conference. Your attention to detail, proactive problem-solving, and commitment to excellence shall set a high standard for future events.
To the participants, your active engagement and enthusiastic involvement have been the driving force behind the success of this conference. The vibrant discussions, networking opportunities, and collaborative spirit shall ensure the success of conference.

As we reflect on the achievements of this conference, let it serve as a testament to our collective capabilities and the potential for even greater accomplishments in the future. The success of this event is a reflection of the caliber of talent and dedication within our engineering community.

Once again, congratulations to all involved to make the conference a resounding success. Let this achievement be a source of inspiration as we continue to strive for excellence in education, research, and innovation.

Thank you for your hard work and commitment.

(Prof. Jai Prakash Pandey)
Vice-Chancellor

प्रो. आलोक कुमार राय
कुलपति
Prof. Alok Kumar Rai
Vice-Chancellor

लखनऊ विश्वविद्यालय
लखनऊ–226007 (उ.प्र.) भारत
University of Lucknow
Lucknow-226007 (U.P.) India

Message

We are pleased to note that Ambalika Institute of Management and Technology, Lucknow is organizing an international conference on "Challenges and Opportunities for Innovation in India (COII-2024)" from 23rd & 24th of February 2024. Innovations have gained importance for the development and growth of the country especially in present day circumstances when, sustainable development is the need of the hour Innovations have become a matter of compulsion rather than a matter of choice. World is looking towards India to lead the world in the emerging world order.

I wish this conference all the success and congratulate the management and faculty members for their initiative in this direction.

My best wishes for the success of the conference.

Dated: 01.02.2024

(Prof. Alok Kumar Rai)

Telephones : 0522-2740467 (O) 0522-2740462 (R) Fax : 0522-2740467 (O), 9415684935 (M), Email: vc@lkouniv.ac.in

MESSAGE

I am delighted to know that the "International Conference on Challenges and opportunities for Innovation in India" (COII-2024) which is going to be organized by our institute on 23rd – 24th , Februaryth 2024. As I know it has been widely accepted by whole academic world.

There is no end for new innovations for the progress in technology and innovation to develop our society & nation. It will continue to evaluate challenges, to recognize new opportunities to innovate unique approach for our development. We at Ambalika continuously strive to innovate and we are creating world class Technocrats, Scientists, Managers and Engineers. Our Center of Excellence is a step forward in this direction. I am sure that Institute and Center of Excellence will jointly become the path breakers in the field of new innovative ideas of Science, Engineering. Technology and Management. It will establish a new teaching methodology to set new standards for others.

Further I convey my best wishes for the grand success of COII-2024 and for the publication of souvenir on this special occasion.

B. C. Mishra
Chairman
Ambalika Group

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SCHEDULE OF INTERNATIONAL CONFERENCE ON CHALLENGES AND OPPORTUNITIES FOR INNOVATION IN INDIA (COII-2024)			
23rd -24th February, 2024			
Day - 1 (23-02-2024)			
S.No	Timing (IST)	SESSION 1: (INAUGRAL SESSION)	
1	10:00 - 10:10 AM	Lamp lightning	ALL DISTINGUISHED GUEST & COLLEGE KEY PERSONS
2	10:10 - 10:11 AM	National Anthem	AIMT STUDENTS WITH ALL PRESENTEES
3	10:11 - 10:15 AM	Welcome of Guests	BY COLLEGE OFFICIALS
4	10:15 - 10:20 AM	Welcome Speech	SHRI AMBIKA MISHRA (CEO AIMT & PATRON COII-2024)
5	10:20- 10:30 AM	Address by Chief Guest	SHRI BRAJESH PATHAK (HON'BLE DEPUTY CHIEF MINISTER, GOVERNMENT OF UP)
6	10:30 - 10:35 AM	Address by Chief Guest	PROF. J.P. PANDEY (HON'BLE VC, AKTU)
7	10:35-10:40 AM	Address by Chief Guest	PROF. VINAY PATHAK (HON'BLE VC, KANPUR UNIVERSITY)
8	10:40 - 10:45 AM	Address by Guest of Honour	PROF. ALOK KUMAR RAI (HON'BLE VC, LUCKNOW UNIVERSITY)
	10:45 - 11:00 AM	HIGH TEA	
Session-2: PLENARY AND KEY NOTE SESSION -1			
1	11:00 - 11:15 AM	Keynote Speaker address	PROF. CHANDER MOHAN, JNU, NEW DELHI
2	11:15 - 11:30 AM	Keynote Speaker address	PROF. O.P.SINGH, PROFESSOR, BHU, VARANASI
3	11:30 - 11:45 AM	Keynote Speaker address	PROF. VINOD CHANDRA, PRINCIPAL, JNPG COLLEGE (KKC), LUCKNOW
4	11:45-12:00 PM	Keynote Speaker address (ONLINE)	DR. ABHISHEK KUMAR SRIVASTAVA, HKUST, HONG KONG
5	12:00-12:15 PM	Keynote Speaker address	DR. PUNEET MISHRA,UNIVERSITY OF LUCKNOW, LUCKNOW
6	12:15-12:30 PM	Keynote Speaker address (ONLINE)	PROF. SVATOPLUK KAPOUNEK , FACULTY OF BUSINESS AND ECONOMICS, MENDEL UNIVERSITY IN BRNO, CZECHIA
7	12:30-12:45 PM	Keynote Speaker address	PROF. MANISH TIWARI, MNIT, ALLAHABAD
8	12:45-1:00 PM	Keynote Speaker address	SHRI. SHAILESH SINGH, CHIEF ENGINEER, UP JAL VIDYUT NIGAM LTD., UP
9	1:00-1:15 PM	Keynote Speaker address	PROF. ALOK MISHRA, PROFESSOR, GAYA ENGINEERING COLLEGE, GAYA
	1:15 - 2:00 PM	LUNCH	
Session-3: PLENARY AND KEY NOTE SESSION -2			
1	2:00-2:15 PM	Keynote Speaker address	DR. ADITYA PADAP, BIET, JHANSI
2	2:15-2:30 PM	Keynote Speaker address	DR. SANJIV SHUKLA, PROFESSOR, BSNV PG CLLEGE (KKV), LUCKNOW
3	2:30-2:45 PM	Keynote Speaker address	PROF. MANISH MADHAV TRIPATHI, INEGRAL UNIVERSITY, LUCKNOW
4	2:45-3:00 PM	Keynote Speaker address	DR. PAWAN KUMAR MISHRA, FACULTY OF BUSINESS AND ECONOMICS, MENDEL UNIVERSITY IN BRNO, CZECHIA
Session-4: TECHNICAL SESSION -1			
			Session Chair/Co-chair
1	3:00 PM Onwards	Oral Presentation (CSE / IT)	DR. SHEEBA PRAVEEN, CS DEPT, INTEGRAL UNIVERSITY PROF. NEETA RASTOGI, CS DEPT, AIMT
2	3:00 PM Onwards	Oral Presentation (ME/PHYSICS/MATHEMATICS)	MR. ADITYA PADAP / DR. ALOK MISHRA/ DR. P.K.DWIVEDI
Day 2 (24-02-2024)			
Session-5: WELCOME SESSION			
1	10:00-10:10 AM	Welcome of Guests and Welcome Speech	DR. ASHUTOSH DWIVEDI, DIECTOR AIMT, VICE CHAIRMAN (COII 2024)
2	10:10 - 10:40 AM	Address by Special Guest	DR. G.P.SINGH, PROFESSOR, BHU, VARANASI
	10:40 - 11:00AM	HIGH TEA	
Session-6: PLENARY AND KEY NOTE SESSION -3			
1	11:00 - 11:20 AM	Keynote Speaker address	PROF. A.K.MISHRA, PROFESSOR, MNIT, ALLAHABAD
2	11:20- 11:40 AM	Keynote Speaker address	DR. KRISHNA RAJ, HBTU, KANPUR
3	11:40 - 12:00 AM	Keynote Speaker address (ONLINE)	MR. AMIR RAZA, UNIVERSITY OF WARWICK, U.K.
4	12:00 - 12:20 PM	Keynote Speaker address	DR. RAKESH KUMAR, IITR, LUCKNOW
5	12:20 - 12:45 PM	Keynote Speaker address	DR.P.K.DWIVEDI, RML UNIVERSITY, AYODHYA
6	12:45 - 1:15 PM	Keynote Speaker address	DR. MANISH BHOLA, TEBODIN & PARTNER LLC, MUSCAT
	1:15 - 2:00 PM	LUNCH	
Session-7: PLENARY AND KEY NOTE SESSION -4			
1	2:00-2:20 PM	Keynote Speaker address	Dr. RAM KOMAL PRASAD, ICCMRT, LUCKNOW
2	2:20-2:40 PM	Keynote Speaker address	DR. MADAN CHANDRA MAURYA, MMMUT, GORAKHPUR
3	2:40-3:00 PM	Keynote Speaker address (ONLINE)	PROF. MOHIT GAMBHIR, PRESIDENT, VERISPIRE CORP, USA & FOUNDER (FORMER) DIRETOR, MINISTRY OF EDUCATION CELL, GOVT. OF INDIA
Session-8: TECHNICAL SESSION -2			
			Session Chair/Co-chair
1	3:00 Onwards	Oral Presentation (CE /EE/EC/CHEMISTRY/BT/MEDICAL/ REMAINING ALL)	DR. RAKESH KUMAR/DR. KRISHNA RAJ/DR. MADAN CHANDRA MAURYA
2	3:00 Onwards	Oral Presentation (MBA)	Dr. RAM KOMAL PRASAD
Session-9: VALEDICTORY SESSION			
1	4:30-4:40 PM	Address by Chief Guest	SRI RAJESHWAR SINGH, MLA, SAROJANI NAGAR
2	4:40-4:50 PM	Best Paper Award	BY CHIEF GUEST
3	4:50-5:00 PM	Vote Of Thanks / Valedictory Session	DR. SHWETA MISHRA, ADDL. DIRECTOR, CONVENER COII-2024

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COII-2024 MANUSCRIPTS ABSTRACT

COII2024CSE001

Empowering Students Future through Artificial Intelligence and MachineLearning Algorithms

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ABSTRACT: In an ever-evolving job market, individuals continually seek guidance and support to make well-informed career decisions. Among them, students with engineering backgrounds face particularly daunting challenges in choosing their career paths. The job landscape undergoes rapid transformations, requiring these students to navigate through multiple complex phases in their decision-making process. As a solution, we endeavor to aid students in making judicious career choices by assisting them in identifying their skills and interests, thereby enabling them to align with the most suitable job opportunities. This review paper delves into the evolutionary progression of career counseling within the digital realm. It conducts a rigorous assessment of the effectiveness and potential of career counselling tools in steering individuals towards careers that are not only fulfilling but also sustainable. Our review undertakes a comprehensive analysis of the existing body of literature on career counselling websites, with a particular focus on aspects such as user experience, accessibility, the delivery of personalized guidance, and the seamless integration of AI-driven tools. We illuminate both the strengths and limitations inherent in various digital platforms. The outcomes of this review unequivocally underscore the transformative potential of career counselling websites in reshaping the landscape of career guidance services. By offering a deeper insight into the current state of digital career counselling. This, in turn, will enhance the provision of career counselling services and provide crucial support to individuals as they navigate the intricate intricacies of the contemporary job market.

Keywords: Career Guidance · Digital platforms · Online resources · Inclusivity · User experience · Machine Learning

COII2024CSE005

Analyze and Categorize the Various Types and Methods of Bank Account Fraud

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Abstract- In this generation of technology, we all depend on the Internet and smart devices. In our daily life we use the Internet regularly. We are now more comfortable using online technology than offline because of its huge benefits. As a result we are regularly trying to use online things and one of them is Online Banking as we know it as Internet Banking. Here I will discuss the benefits of Internet Banking. But now as it's more convenient than the offline banking or physical travel to the bank, at the same time the unauthorized and illegal activities take place. So to stop these unauthorized activities Government and some private sectors already start work on it using different methods. Here I will discuss some methodology to prevent bank account fraud or scam by the hacker illegally. Because it's become a major problem for the growth of the economy. So to prevent this problem we need to start using advanced technology, knowledge of users as well as bank employees, good employment practice, a well-built system of management needs to take place.

Keywords: Bank account, Online Banking, Internet banking, Fraud, unauthorized access, scam, prevention and detection.

COII2024CSE006

Boosting Wireless Sensor Network Performance in Coal Mines with Virtual MIMO

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Abstract-Wireless sensor networks rely heavily on battery power for continuous operation, making energy efficiency a critical factor in their longevity. To address this challenge, a novel architectural system known as Virtual MIMO has been developed. Virtual MIMO operates in conjunction with traditional MIMO technology and holds the potential to establish an energy-efficient network. Leveraging the synergistic benefits of Virtual MIMO, which include enhanced system generalization and energy conservation, it becomes possible to employ MIMO technology within a single antenna system. This paper primarily centers on the utilization of Virtual MIMO to prolong the lifespan of wireless sensor networks while minimizing energy consumption.. alongside various S-parameters, the research reveals varying return loss values in decibels (dB) at different frequencies, such as S21, S22, S11, and S12. In summary, Virtual MIMO techniques play a pivotal role in the creation of efficient wireless sensor networks and offer a means to optimize their overall performance

Keywords: (MIMO), (SISO), (WSN), (RF), (MSA).

COII2024CSE011

Strengthening India's Defence Technology & Engineering Arm: Role & Perspective of Indigenisation

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Abstract: The indigenisation program of a nation is a capacity building exercise in terms of latest technology, materials development as of current requirements, adoption of state of the art processes, skill upgradation and following the best practices in quality assurance domain. The indigenisation program is ultimately aiming reasonable Gross Domestic Product (GDP) index and saving of foreign exchange by negative import. In India's context it is the structured indigenisation program to strengthen India's defence technology, engineering arm and concurrently to reduce import burden and enhancing defence export substantially. In the instant paper, it is brought out to establish the indigenizing capability in general and Silent Watch Capability of Defence Equipment with use of Lithium Ion Battery as a power pack and conducting Condition Based Maintenance of defence heavy vehicles for sustainable field operation in particular. Both aspects brought out are not yet have been established as of now to the operational desired level. Literature reviews brought out challenges in recharging of lithium Ion batteries for remote uses of defence applications and sustaining rate of discharge at initial condition. The condition based maintenance for defence vehicles through prescriptive maintenance is also not yet established due to very higher horse power capacity in the tune of 1400 horse power capacity and multiple requirements like all terrain use, mobility, firepower and protection of the vehicle and crew.

Keywords: Innovations; Vocal for Local; Negative Import; Interface; Resilient Infrastructure, Resource Mobilization

COII2024CSE012

SENTIMENT ANALYSIS ON COVID-19 TWITTER DATA USING MACHINE LEARNING ALGORITHMS IN PYTHON

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ABSTRACT: The COVID-19 has instigated anxiety with loss of lives. This could have been avoided if the spread was noticed in the early stages of the pandemic. Sentiment analysis is a technique to find out individual's emotion by investigation on social media. In this paper, a methodology is proposed to carry out multi-label classification of COVID-19 tweets using

Bidirectional Encoder Representation from Transformer (BERT). The proposed work compares the accuracy of BERT models on the Sen Wave dataset. The outcomes are indicated by heatmap representation of tweets across labels. There are different machine learning techniques which are used for sentiment analysis. Mostly sentiment analysis done by using machine learning classifier like SVM (support vector machine), Random Forest, Naïve Bayes. [4]

COII2024CSE013

Rescue Hub: Uniting Relief Agencies in Emergencies

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Abstract: The first seventy-two hours after a disaster are critical to saving lives. Managing a large disaster and rescue team that can respond in multiple locations can be challenging. In this work, we provide a web application that can monitor the movement of the receiver. By using tracking data that decision makers at the command center display on a map, rescue teams can be deployed to unreached areas and the program has the potential to save many lives by rescuers who they will be moved to the fastest. It is anticipated that this application will assist in identifying the nearest evacuation site and enhance the efficiency and transparency of local emergency response teams for further evacuation planning. The web application uses Google Maps, locations, and application programming interfaces to provide evacuation center location maps in a specific outbreak area through the Google Maps Platform (SDK) This paper also recommends future scoping activities. In addition to technological developments, this study highlights the broader impact on public safety and disaster preparedness. The integration of MongoDB for geospatial data storage and Firebase for real-time updates enhances our disaster recovery strategy. MongoDB's geospatial index stores location-based information, while Firebase's real-time database ensures instant data synchronization, and is a dynamic and responsive solution for more efficient emergency response and community delivery will be involved The assessment is divided into sub-objectives that will provide an immediate integrative framework. The main objective of this paper is to establish a communication framework for disaster management. This system is very useful for disasters. The software has a Real-time Graph showing human losses and economic losses on a monthly basis for the selected year. So this system can help manage risk.

Keywords — Disaster rescue squad, Web application, Tracking data, Evacuation center, Google Maps, MongoDB.

COII2024ME014

Thermodynamic Comparison of Conventional and Hybrid Power Cycle

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Abstract— Rapid increase in population, the demand for energy consumption increases. The existing conventional power plants are performing well but are not enough to fill the gap between energy demand and supply. To fill this gap a hybrid power generation system is proposed which is compared with the conventional system. A hybrid system is the integration of a high-temperature fuel cell, called a Solid Oxide Fuel Cell (SOFC) to the conventional gas turbine (GT). A thermodynamic comparison between these two configurations is presented at a pressure ratio of 6 and a turbine inlet temperature of 1250 K. The energy efficiency and exergy efficiency of the hybrid system are found to be increased significantly and simultaneously the network output increases, which helps to minimize the gap between the demand and supply.

Keywords— Exergy, Gas turbine, SOFC, Thermodynamics

COII2024CSE017

SECURITY IN SOFTWARE DEFINED WIRELESS SENSOR NETWORKS: CHALLENGES AND POSSIBLE SOLUTIONS

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ABSTRACT: A Software Defined Wireless Sensor Network (SD-WSN) is a truly developed model as would be viewed as standard to anticipate an epic part not only there of brain of the Catch of Things (Iota) perspective yet furthermore as a phase for various applications like

stunning water the trailblazers. This model purposes a thing a Software-Defined Networking (SDN) system for managing manage a Wireless Sensor Network (WSN) to manage a monster piece of the inalienable issues including WSNs. Security is one of any affiliation's most basic highlights. During the progression of SDWSNs, this area has gotten little thought considering the way that the majority of assessment bases on security issues connecting with WSNs and SDNs freely. Concerning the security of SDWSN, examination is required. The SDWSN model does not support all of the security concepts from SDN and WSN. Further assessment is typical into setting SDN and WSN success attempts to think about security in SDWSN. Using the WSN and SDN standards, the risks, issues, and anticipated solutions for protecting SDWSN are considered.

INDEX TERMS: WSN, Security Issues, SecurityFears, SDN, SDWSN

COII2024AS022

Circular flow number of unbalanced edge connected signed graph

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ABSTRACT: The concepts of circular flow first introduce by F. Jaeger [1] in 1984 and proposed a conjecture for circular flow. In 1998 Goddyn and etal [4] gives the concept of circular flow number as the dual of circular chromatic number, recently Tao-Ming Wang and etal [5] show in 2012 Zero sum flow numbers of regular graphs. Andre Respoud and Xudin Zhu [7] gives the new concept of circular flow number for signed graph, after that Xudin Zhu[8] in 2012 gives the result for circular flow number of highly edge connected signed graphs. Now in this paper we show that for any positive integer kk>1, every essentially 2k-1-unbalanced 12k-1-edge connected signed graph has circular flow number at most 2+1k.

Key words: Flow Number, Factorization of Graph, Signed Graph, Circulation

COII2024CSE024

Leaf Diseases Detection using Machine Learning Approach

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ABSTRACT: Plant diseases pose a significant threat to global agriculture, leading to substantial crop losses. Detecting these diseases in plants proves to be a challenging task, primarily due to the scarcity of expert knowledge. In our study, we have developed a Convolutional Neural Network (CNN) with a streamlined architecture featuring a reduced number of layers, Our CNN model has been meticulously trained to Bacterial Leaf Blight, Brown Spot, and Leaf Smut diseases in rice leaves, using the publicly accessible Plant Village dataset and achieving an impressive classification accuracy of 98%. Notably. While other CNN models for crop disease detection with similar accuracy do exist, our model's efficiency in terms of storage and computational resources makes it a highly suitable choice for deployment on handheld devices.

Keywords: Plant Disease Detection, Image Processing, Constitutional Neural Network,

COII2024ME025

Experimental Investigation of Mechanical Properties and Machining Parameters of Inter-Critical Heat Treated Mild Steel

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ABSTRACT: The surface roughnesses of the annealed and inter-significantly heated sample were evaluated after turning operation at the lathe and correlated with the mechanical houses and microstructure. The turning were finished on middle lathe with speed of 480 RPM and feed price of zero.Sixty three mm in step with revolution and the floor roughness were measured on the optical profilometer. The specimen with higher ductility confirmed a lower floor roughness than the specimen with decrease ductility. Segment morphology additionally influences the surface roughness.

Keywords— Inter-critical heat treatment, Microstructure, Mild steel, Machining, Surface roughness.

COII2024IT026

A Review on Hybrid Approach on Textual Data for Emotion Detection Using Machine Learning

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ABSTRACT: The majority of people on the planet today have access to the Internet for text, image, audio, and video communication. On social media, people with different backgrounds share information about current events and express their opinions about them. Analysing people's emotions is necessary in order to comprehend and identify the behaviour of such vast amounts of textual data about them. Human interaction is greatly influenced by emotions. A person's speech, face gestures, body language, and sign actions can all be used to figure out their emotional state. These days, people communicate with each other via a variety of text-

based devices, so extracting emotion from texts has become increasingly important. Therefore, it is essential that machines comprehend emotions in textual conversations in order to provide users with feedback on their emotional awareness.

COII2024IT027

Electronic Voting System Using Blockchain and AI

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ABSTRACT: In today's democratic processes, ensuring the integrity of elections is a top priority, and the voting process must be smooth to allow every citizen to cast their vote. This research aims to develop solutions to strengthen our democratic participation, which is susceptible to issues like vote rigging and vulnerabilities in electronic voting machines (EVMs). Additionally, it seeks to make online voting available for citizens.

Our proposed E-voting model uses blockchain technology to provide a comprehensive solution to these challenges. The system not only establishes a secure and verifiable e-voting framework but also ensures participant anonymity for public scrutiny. In our research, we closely examine the challenges in today's elections and propose a significant change with our E-voting model. We explore different ways to use blockchain, each offering a service called "blockchain-as-a-service." We also investigate the potential of combining blockchain and artificial intelligence (AI) to further enhance our e-voting model. Integrating AI algorithms into the system adds an extra layer of capability. This collaborative effort between blockchain and AI underscores our strong commitment to implementing the latest technology to enhance the functioning of democracy in the years to come. The incorporation of AI algorithms means the system gains the ability not only to detect irregularities but also to adapt and evolve in real time. This proactive approach ensures that the e-voting process remains resilient and responsive to the ever-changing landscape of potential risks.

In essence, our research highlights the possibilities of revolutionizing election systems to ensure that everyone can vote. It is not just about improving the current state of e-voting; it's about future-proofing our electoral systems and ensuring they remain robust, transparent, and effective in safeguarding the democratic process.

Keywords.: Blockchain, E- Voting , Artificial Intelligence (AI)

COII2024EE028

Intelligence Computation Based AGC of Multi Area Interconnected System Based on Electric Vehicles

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Abstract: Power systems such as industrial plants have some uncertainties and deviations due to multivariable operating conditions and load changes that leads to problem of frequency stabilization. The paper presents the operation and control strategies of large interconnected power systems with automatic generation control (AGC). The prevailing situation of power sector in India is also reviewed with operational process, transmission systems, control functions and automation of interconnected power systems. However the main focus is discussed on the AGC strategy at different levels. Different intelligent techniques such as genetic algorithm (GA), simulated annealing (SA), particle swarm optimization (PSO), ant colony optimization (ACO), fuzzy logic based optimization (FL) and artificial neural networks (ANN) based optimization based AGC is examined that are used in present times.

Keywords: Interconnected, Power System, Intelligent Techniques, AGC, PV,EV.

COII2024ME029

Experimental Procedure of Copper Electroplating on Tungsten Powder

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ABSTRACT: Reinforcing, safe and protecting properties, to give some examples, can be accomplished by carrying out a surface material covering onto a designing part. Different components of these intensified parts can expand the usefulness of the part, for example, expanded life time and more intuitive surfaces. Tungsten has demonstrated to be a test to plate with different metals, yet whenever done accurately, the outcomes can consider the virus shower of tungsten. Cold showering tungsten particles alone gives a test in light of the fact that the powder is excessively hard and on second thought of sticking, it disintegrates the surface it is endeavoring to plate. Covering tungsten in a gentler metal, similar to copper, will consider the particles to stick to the surface and make a fortified and radiation safeguarded part. It likewise yields a superior surface to electroplate onto from now on, as tungsten itself is difficult to plate onto, so the copper layer gives the capacity to plate different metals without any problem. The reason for this exploration paper is to exemplify tungsten powder inside copper, then, at that point, increase the cycle to create mass measures of the material in a cluster cycle. The particles will be encased utilizing an electroplating strategy, that has been transformed into a semi-independent interaction for the simplicity of delivering mass powder. While electroless testimony has recently shown positive outcomes for accomplishing a uniform covering, making it a semi-group process for mass material would have a super expense in contrast with electrolytic statement. The tungsten particles have been effectively encased in copper by electrolytic statement here of trial and error utilizing a HF electro-scratch pretreatment and ultrasonic disturbance during electroplating. Further trial and error will incorporate superior techniques for blending and moving powder, as the exchange takes too lengthy between the engraving and the beginning of plating and the mixing strategy is massive and decreases the region that can be productively plated on.

Keyword: resistant, Tungsten, Coating, electrolytic deposition

COII2024CSE030

Performance Enhancement of Emotion Detection Using Text From Wassa Data-Set

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Abstract: Nowadays, text devices are the primary means of communication and interactions. Extracting emotions from text has become a crucial research area in Natural Language Processing due to its practical utilities in HumanComputer Interaction, recommendation systems, online education, data mining, and more. However, one of the challenges in emotion extraction from text is irrelevant feature extraction, which can lead to mis-prediction of emotions. To overcome this issue, this project proposes an Emotion Detection Model that extracts emotions at the sentence level. To ensure a well-balanced dataset, we augmented an existing benchmark dataset that only contained four emotions (fear, sadness, joy, and anger) by adding a neutral class. We then explored the effectiveness of two models - Support Vector Machine (SVM) and Bidirectional Encoder Representations from Transformers (BERT) - for performing emotion recognition on this extended dataset. By combining these two models in an ensemble, we achieved a new state-of-the-art accuracy of 0.91 on the task of emotion recognition in tweets. These findings show the effectiveness of our approach and its potential for improving emotion detection in various applications.

COII2024EE031

Fractional order Control technique Grid Interfaced Three-Phase Two-Stage Solar PV Energy Conversion System

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Abstract: Photovoltaic (PV) technological advances it is vital to be interconnected from a grid-connected, adaptive Control strategy approach in order to utilize the photovoltaic power effectively and for the optimization of electricity energy. A grid-connected photovoltaic (PV) system is illustrated in this work incorporating a fractional order proportional-integral (FO-PI) controller. This method suggested using a closed loop, extremely high gain, and multilevel DC/DC boost converter in addition to other components to provide the inverter input with controlled DC link voltage. According to the electricity generated through solar panels and the power supplied by the utility grid, the Fractional Order control manipulation technique enables impartial control of actual energy (P) and reactive electricity (Q). A comprehensive investigation of the Matlab/Simulink flexible control of the grid-connected PV system was conducted. A comprehensive investigation of the Matlab/Simulink flexible control of the grid-connected PV system was conducted. The device reaction during a disturbance with a FO-PI controller, regulation of the grid power component, and the Total

Harmonic Distortion (THD) of grid current for any solar radiation are validated by the results of simulations

Keywords- Solar photovoltaic system (SPV), power quality, unity power factor (UPF), Fractional PID, maximum power point tracking system (MPPT),

COII2024EE032

Verilog HDL Verification and Efficient 2-D FIR,Filter implementation using Distributed Arithmetic Algorithm,

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Abstract— This paper presents an innovative approach to design and verify, 2-D Finite Impulse Response (FIR) filter using Distributed Arithmetic (DA) Algorithm. The DA base FIR filter architecture consists of Hardware-based Look u Table (HLUT), Shift registers and Shift accumulation Block Using Xilinx 14.7 synthesis tool Simulation Parameters ar calculated. The proposed architecture provides an efficien area-time-power implementation which involves significantl less power and less area-delay complexity when compared wit conventional structures for FIR Filter.

Keywords— Distributed Arithmetic (DA), Finite Impuls Response (FIR), Hardware-based Look Up Table (HLUT)

COII2024CSE033

API- Driven Digital Transformation Of Supply Chain Optimization

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Abstract - This research paper investigates the profound impact of API-driven digital transformation on enhancing supply chain optimization. In today's dynamic business landscape, supply chains face escalating complexities and challenges, necessitating agile and

innovative approaches to streamline operations. Digital transformation, particularly through Application Programming Interfaces (APIs), emerges as a pivotal driver reshaping traditional supply chain models. This study presents a comprehensive review of existing literature, exploring the intersections of supply chain optimization, digitalization, and API integration. It scrutinizes the role of APIs in fostering seamless connectivity, data exchange, and real-time visibility across supply chain networks. Methodologically, the research employs a combination of case studies, industry surveys, and quantitative analyses to examine the efficacy of API integration in optimizing supply chain processes. The findings reveal tangible improvements in efficiency, cost reduction, inventory management, and responsiveness to market fluctuations following API adoption. Moreover, the paper delves into the challenges and potential bottlenecks associated with API implementation, offering insights into mitigating risks and maximizing benefits. This study contributes empirical evidence and critical insights, emphasizing the transformative potential of APIs in orchestrating agile, data-driven, and interconnected supply chains. Ultimately, it underscores the imperative for businesses to strategically leverage API-enabled digital transformations to remain competitive and resilient in an evolving marketplace.

Index Terms - API Integration, Supply Chain Management, Digital Transformation, Logistics Optimization

COII2024ME034

DESIGN AND FABRICATION OF VORTEX COOLER WITH HIGH PRESSURE STREAM FOR COOLING AIR

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Abstract - Vortex cooler is a simple device with no moving parts. It separates inlet high pressure stream of air into two lower pressure streams of cooler temperature at one end and hotter temperature at other end. It is basically of counter flow type and parallel flow type. It has many advantages and wide range of applications, mostly using counter flow owing to better performance than parallel flow. Most of the applications reflect the benefits in terms of performance, energy, compactness or as an alternative to the conventional method. Variable temperature system uses vortex tube along with water to cool the air. In case of high speed machining tools, vortex cooler cooling improves the performance along with lowering the temperature. Vortex cooler cooling is to minimize heat affected zone. Vortex air coolers are preferred for different industrial applications. The personal air suit uses vortex tube to allow workers to work under adverse conditions for longer hours. Vortex tube refrigeration is alternative way to the conventional refrigeration in some applications.

Key Words: Vortex cooler, Temperature Separation, nozzle, Cold Tube, Hot Tube

COII2024IT035

A Review on Data Mining & Techniques of Clustering Algorithms

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Abstract: In today's world information technology is everywhere, to maintain account records in banks, to maintain records of the patients in hospitals, to record academic performance of the students in educational institutes etc. In the late 1980s, a novel trend emerged to take intelligent and safe decisions from meaningful data gathered in information systems. The mining of data defined by a process which generates patterns or knowledge with the collected data for making a decision. It helps organizations to take right decisions at right time. Data mining provides techniques to process large amount of data efficiently and presents it in the required form. The predefined strategies and calculations that are utilized to separate these helpful examples are known as mining of Data. the various popular mechanisms used as mining of data. Several analysis algorithms can be used for mining of data like association rule, pattern identification, clustering, and classification.

Keywords: Data Mining, Association rule, Pattern Identification, Clustering, Classification.

COII2024ME036

Air to water, Atmospheric Water Generator (A Review)

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Abstract— Water scarcity is a critical issue globally, notably in arid regions like India, where acquiring water resources main challenging. Approximately1.2billionpeople grapple with water scarcity globally, making innovative solutions like Atmospheric Water Generators crucial for sustainable water provision. This problem extends worldwide, exacerbated by insufficient rainfall. However, humid coastal areas offer a potential solution through the condensation of water vapor. Due to water scarcity, the Atmospheric Water Generator emerges as an energy-efficient alternative solution. Unlike traditional methods, this approach offers a compact solution with reduced electricity requirements. The study focuses on a solar-powered thermoelectric cooler for water generation, particularly beneficial in rural areas with limited electrical sources. In urbanized regions, where over half the world's population resides, innovative solutions like atmospheric water generators could alleviate water scarcity in slums. The proposed project integrates water generation with urban farming, creating an interdependent network to address water and nutrition challenges.

Keywords— Peltier Effect, Atmospheric Water Generator, Seebeck Effect, Solar Energy, Semiconductor

COII2024AS037

Aesthetic Theory in Dalit Literature

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Abstract: The term 'dalit' literally means "oppressed" and is used to refer to the "untouchable" casteless sects of India. Dalit, also called outcaste, is a self designation for a group of people traditionally regarded as untouchables. Dalits are a mixed population of numerous caste groups all over India, South Asia and all over the world. There are many different names proposed for defining this group of people like Ashprosh (Untouchable), 'Harijans' (Children of God) 'Dalits, (Broken People) etc. The word 'Dalit comes from the Sanskrit and it means "downtrodden", 'suppressed,' 'crushed' or 'broken to pieces'. It was first used by Jyotiraophule in the nineteenth century in the context of the oppression faced by the erstwhile Untouchable castes of the twice-born Hindus. Mahatma Gandhi coined the word 'Harijan', translated roughly as "children of God" to identify the former untouchables.

Dalit Literature is not a new area of writing in Indian English Literature. Aesthetic theory in Dalit writing is indigenous and is firmly rooted in the history, politics and culture of Dalit. Dalit writing portrays dreadful reality, the causes and effects, the expression of radical revolt against the age old existence of oppression and despair of the lives of marginalized class, conventions and dogmas of Hindu religion used as motif, which defines Dalit Literature.

This paper is an attempt to highlight the problems faced by Dalit writers, who have arisen to write about their plights and situations in the society. Though, a lot of movements and programmes have been introduced related to improve the conditions of Dalits in the modern era.

Keywords: Awareness, dalit, aesthetic, disparaging, debunks.

COII2024AS038

Teaching and Learning Technical English for Engineers

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Abstract: Teaching and acquaintance of Technical English for Engineers is an crucial aspect for employability where linguistics expertise are sharpen to excel in ones career along with technological subjects. This paper emphasize more upon the applied part of communication skill, so that it may prove useful to them later on too in their professional life. I also draw attention to the need of sub skills at technical pinnacle and its importance in campus

placements where the linguistic skills are tested in the form of group discussion or oral presentations and its practices towards learning Technical English.

COII2024CAS039

LIQUID CRYSTALS WITH ITS GIGANTIC POTENTIALS

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Abstract: Liquid crystals are the unique substance those are exist in-between the liquid and solid states. Liquid crystals have distinct molecular configuration than the liquids and solids. The liquid crystalline phase may occur either due to heating of solids (thermotropic LC) or due to dissolving an amphiphilic mesogen in a suitable solvent (lyotropic LC). There are various types of liquid crystals based on distinct internal arrangement of molecules in lattice. They acquire lots of properties of a liquid, as high fluidity, incapability to support shear, creation of droplets however they show crystalline behavior as anisotropy in their optical, electrical, and magnetic properties. Due to its unique structure and performance it has a large number of applications in various areas. This review paper discusses the exclusivity of LCs, its types, properties and vast applications in various fields such as displays, medical, pharmaceutical industries, cosmetic industry, sensor. Application of LCs in new fields based on latest research and its remarkable potential is also discussed.

Keywords: Liquid crystals (LCs), mesophase, displays, recent applications.

COII2024CSE040

A COMPARATIVE STUDY ON FINGERPRINT PROTECTION AND ANALYSIS OF BIOMETRIC DATA USING WATERMARKING TECHNIQUES

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Abstract- Digital watermarking techniques are used to safeguard biometric data from intentional or unintentional attacks, and biometric data protection is becoming more and more popular. Since fingerprints are unique to each individual and are primarily utilized for the formation of instantaneous personal identity, they are more well-known among the numerous biometrics in the authentication space. When sent over a network, they are vulnerable to both unintentional and deliberate attacks. It is therefore necessary to implement a defensive mechanism that will maintain fidelity and stop modifications. This study examines two methods that use digital watermarking to secure fingerprint biometric data. The two methods that are going to be explained both rely on Discrete Wavelet Transformation (DWT). Based on the experimental findings, it can be said that both methods offer sufficient security for the fingerprint data without

COII2024AS041

Prevalence and Technology advancements at work place to enhance occupational health and safety of employees

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Abstract- Occupation has always been a major source of health challenges in the workers. An occupational disease is a health condition caused by the environment or activities at work place. The workplace related diseases occur as a result of continual exposure to industrial environmental hazards and are observed at a higher frequency in people than rest of the population. Amongst various health challenges, respiratory disorders including asthma, lung diseases and Chronic Obstructive Pulmonary Diseases (COPD) have highest propensity to occur at work place. Therefore, understanding, analyzing and adopting ways to minimize the impact of hazards on the workers is immediate need of the time. Emerging technologies such as, assessing particulate matter floating at work place, wearable devices, digitization in occupational health, could prevent contracting infection, exposure to noxiuos substances and oxidative stress, insuring safety of workers. Moreover, e-consultations, bringing telemedicine into practice is getting approachable technique providing onsite and immediate advice. This state-of-the-art technologies could provide key metrics allowing industries to maximize employee engagement and reduce morbidity and mortality. Here, we aim to identify risk factors, their prevalence about which employees need to be warned off to avoid any workplace induced fatalities.

Keywords: Occupational disease, respiratory disorders, digitization, wearable devices, telemedicine

COII2024AS042

Simulation-Based Learning: The Key Elements Growth of Cloud Kitchen & behavior's Ordering Patterns in the Post-Covid Era

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ABSTRACT: This study intended to investigate how simulation technologies are beneficial to management and higher education. Buzzwords like immersive settings, participatory learning, experiential learning, experimental learning, etc. are commonly used in modern educational practice. E-learning and virtual learning environments are only two examples of the cutting-edge educational techniques that have evolved as a result of the swift growth in the information and communication technology industry. New educational technologies are widely used, particularly in higher education. Institutions of higher learning exist to train

future professionals. A disruptive aspect of the food service industry is the concept of a cloud kitchen, also known as a virtual or ghost kitchen. In contrast to conventional restaurants, Cloud Kitchens don't have actual eating areas and instead provide meal preparation and delivery services. The operational paradigm, advantages, and influence of Cloud Kitchens on the food industry are all covered in this abstract.
Overall, the findings show that Cloud Kitchen simulations are helpful for achieving learning objectives. The main benefits of a simulation include fostering new learning relationships with the students, offering them new roles to play, and improving their capacity for active learning. This essay examines the notion of simulation as well as how simulation is viewed by the general public in management education.

Keywords: Cloud Kitchen, simulation, Post-Covid Era, operational paradigm**.**

COII2024EE043

Automatic Generation control for diverse control Unit Using Modified PSO Technique Based on PID Controllers

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Abstract: Load frequency control (LFC) is one of the most important research problems in power systems operation and control for supplying sufficient and steady electrical power. This work presents a revolutionary design of several types of artificial intelligence (AI) load frequency predictive control (PI) controllers. These controllers are built using several AI optimization tie-line techniques, such as Model Predictive Control (MPC), fuzzy-tuned GOA, and PSO. According to the controller's performance analysis, the peak overshoot, settling time, and frequency deviation signal of the frequency output signal have all improved. Tools from MATLAB/SIMULINK are utilized to verify the effectiveness of the recommended approach.

Keywords—LFC, DVR, AVR loops, PSO, PID Controller, ACE.

COII2024CSE044

LOAN STATUS PREDICTION USING MACHINE LEARNING ALGORITHMS

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Abstract: In the financial system in India, banks can promote a variety of goods including loans, savings accounts and more, but their main revenue stream is from credit lines. The interest on the loans they have credited will therefore be profitable for them. Loans – specifically, whether clients are making their loan payments on time or defaulting – have a

significant impact on whether a bank make a profit or a loss. Every year, more individuals and organizations request for loans in India. Finding a trustworthy borrower who will return the loan may be difficult, even in a situation when many people are asking for loans. By anticipating defaulters of the loan, the bank can degrade the non-performing assets. When the process of selecting the best applicant is done manually, several mistakes might be committed. Therefore, we are creating a self-governing loan status prediction system powered by machine learning to choose the qualified applicants. Both the bank staffs and the applicants will benefit from this. There will be a notable decrease in the time required to authorize a loan. In this work, we have used many machine learning methods to forecast the loan data. The ultimate goal of this project is to decide if it is safe to authorize loans to a certain person.

Keywords: Machine Learning Algorithms; Gradient Boosting Algorithm; Support Vector Classifier; Decision Tree Classifier; Random Forest Classifier; Various Python Libraries(including Matplotlib, Pandas, Numpy, Seaborn and Dtale)

COII2024CSE045

To Identify Diagnostic Features from Diabetes Related Retinopathy Using Image Processing

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Abstract: The primary objective of this technique is to use image processing techniques to detect the eye illness known as diabetic retinopathy (DR). This approach involves use of MATLAB (R2010a), an effective image processing tool. This technique makes use of MATLAB (R2010a), a popular image processing tool. In order to detect diabetic retinopathy (DR), a technique for distinguishing blood vessels from medical images of the human eye's retinal fundus is demonstrated in this research. This methodology makes use of the The CLAHE technique (Contrast Restricted Adaptive Histogram Equalization) algorithm, which is an open CV (Computer Vision) structure implementation for adaptive histogram equalization. The outcome demonstrates that 98.99% accuracy can be acquired in recognizing the presence of DR, with the impacted DR being recognized in the fundus image and the DR identified in the healthy fundus picture.

Keywords: Diabetic Retinopathy, processing of images, contrast-limited adapt histogram equalization, and adaptive equalization of the histogram

COII2024AS046

REVITALIZING INNOVATION IN EDUCATION AS PER NEP 2020

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ABSTRACT: Highlights special features of India that is Bharat. Defines innovation and states its importance in education. Describes research and innovation in the higher education system in India based on New Education Policy 2020. Enumerates some examples of innovation in education. Discusses about establishment of the National Research Foundation (NRF) to enable a culture of research in the country through suitable incentives for and recognition of outstanding research and establishment of the Higher Education Commission of India (HECI) to ensure the distinct functions of regulation, accreditation, funding, and academic standard setting.

Keywords: Higher Education; Innovation; New Education Policy 2020]

COII2024CSE047

Detection and wellness of Mental Health using Machine Learning approaches

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Abstract- In today's world, Mental Health is a major issue. Our research seeks to provide a system that is the ML-based web application which evaluates the mental health of the user and provide close to accurate remedies – assigning tasks, and recommending various different ways to uplift mood and cope with stress and anxiety. To monitor mental health, image of the user is captured with the help of a webcam. After the user's picture is taken, a simplistic question is being asked in the form of quiz. Depending on the user's preference, the system will recommend some activities including articles, music, feed, books videos, movies etc. The correctness of the outcome is totally based on how the user answers the questions. The system makes use of Natural Processing Language (NLP), MySQL for sentiment analysis and Machine learning algorithm (random forest algorithm).

Keywords: Stress, Web Application, Sentiment Analysis, NLP, Machine Learning, Recommendation System, Mental Health.

COII2024EE048

European Commissions' Directive Against Greenwashing A Policy Review

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Abstract- The term 'greenwashing' was first used by Jay Westerveld in 1980 to describe 'dishonest practices used by businesses to represent themselves as more sustainable; either by giving a false impression or providing misleading information as to the sustainability of a product or service' (Wagemans & Montens, 2023). The study explores the timeline of events,

reports, legislatures and directives which led to the formation of the European Union's policy against greenwashing.

In recent years green labeled products are found to be more in demand with a 71% rise in the search for sustainable products globally and over 80% EU consumers interested in durability of the products which contribute towards circular economy (EU, 2023). Survey conducted after the COVID-19 crisis in 4 EU countries found that between 66 – 76% consumers would buy products which are better for the environment even if they cost more (Hahnel, 2020). Many European citizens believe that 'changing the way we consume' is the most effective way to tackle environmental problems (Eurobarometer, 2020) European Commission (EC) explains green claims as ''Implicit, general or explicit practice of suggesting or otherwise creating the impression that a good or a service has a positive or no impact on the environment or is less damaging to the environment than competing goods or services. The study conducted by the EC in 2020 assessed 150 environmental claims and exposed 53.3 % of the claims as vague, misleading or based on unfounded information, 40% have no supporting evidence and over half of the labels offer weak or non-existent verification. There were 230 sustainability and over 100 green labels in the EU with vastly different levels of transparency. (EC, Green Claims, 2021) The proposal is in the advanced stage. Once approved by the European Parliament and the Council of the EU it will be adopted and the directive will be implemented in national legislation of all EU Member States.

COII2024AS049

CONVECTION-REACTION FLOW IN A SQUARE ENCLOSURE FILLED WITH POROUS MEDIUM - A Review

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Abstract--This paper provides a literature review of the double-diffusive convection-reaction of a binary mixture in a square enclosure filled with a porous media, with constant temperatures and concentrations at the two vertical walls and adiabatic and impermeable horizontal walls. The boundaries of the enclosure are under chemical equilibrium. The porous medium is assumed to be in local thermal equilibrium (LTE) state and the solubility of the dissolved salts depends on temperature. The two dimensional steady-state flow rate is determined by a non-Darcy (Darcy–Brinkman) model, and the entire governing equations are solved using the usual SIMPLE-R finite-volume methodology. It has been found that as the reaction rate increases in the system the salt precipitation also increases, causing a decrease in overall mass transfer rate. Also, the chemical reaction tends to decrease the overall heat transfer-rate.

Keywords: Darcy–Brinkman model, double-diffusive convection-reaction, SIMPLE-R algorithm, porous medium, heat and mass transfer

COII2024AS050

ENHANCEMENT OF HEAT TRANSFER THROUGH FINS

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Abstract: Various industries nowadays use extended surfaces, better known as fins, to increase the heat transfer rate wherever required. Fins are easy to construct and provide more effective heat transfer when used. The heat transfer through fins depends upon several parameters that are obtained from several experiments by different researchers. Factors such as the number of fins, geometry and spacing, fin thickness and material to be used, and the environment of an application decide the overall functionality of the fins. Moreover, surface operations such as perforations can further increase the fin effectiveness by substantially increasing the heat transfer rate. Also, along with actually reducing the weight of an individual fin, this can increase the surface area engaged in the heat transfer process without having to alter its dimensions. So, in this paper, various parameters have been discussed that are responsible for the enhancement of the overall performance of the fins.

Keywords: Heat transfer, effectiveness, perforations, geometry, fins.

COII2024EE051

A Review On: Sensor less Control Techniques for Electric Vehicle Motors

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Abstract— In electrified vehicles, the electric motor is a crucial component of the electric propulsion system. Achieving the required operational parameters for the electric drive train requires careful selection of the appropriate electric motor and management of its speed and torque. This study reviews high transient performance speed sensorless control for traction drive and various traction motor types for electric and hybrid electric vehicles (HEVs). The electric propulsion system's electric motor types, which are essential for their operating features and limits, are compiled from a system viewpoint using the latest innovations. This is a brief introduction to speed sensorless control for high performance applications, such as hybrid electric vehicles (HEVs) and electric cars (EVs). Different rotor-based devices based on mathematical models We examine the key features and practical limitations of sensorless control rotor speed estimate systems. This study concludes by suggesting future lines of inquiry for traction motor drive speed sensorless control research.

Keywords—Vehicles using alternative energy, electric, hybrid, and traction motors; motor control; and speed sensorless control.

COII2024EE052

Examining Brushless DC (BLDC) Motors Design Strategies

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Abstract— BLDC motors, pivotal in industries like automotive and pumping, are set to dominate power transmission by 2030. Despite their rising popularity, challenges in reliability persist. This paper fills critical gaps by reviewing advanced controls, including fault tolerance, EMI reduction, field orientation control (FOC), direct torque control (DTC), current shaping, input voltage control, intelligent control, drive-inverter topology, and torque ripple reduction. The survey spans historical evolution, motor types, structure, modeling, and applicable standards across diverse applications, addressing key concerns in the field.

COII2024ME053

Programming a Scara Robot for a Manufacturing cell to Assemble and produce Medical devices

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Abstract— In this research paper, we investigate into the conception and purpose of a programming framework for a SCARA (Selective Compliance Assembly Robot Arm) robot in a manufacturing cell exclusively intended for the assembly and fabrication of health devices. It is of paramount significance to include robotic systems into the manufacturing of medical devices as it significantly enhances effectiveness, meticulousness, and scalability. The programming approach projected in this research aims to take advantage of the prospective of the SCARA robot in handling complicated assembly tasks while guaranteeing the production of top-quality health devices.

Keywords— SCARA robot, manufacturing cell, programming framework, medical devices, assembly system, efficiency, precision, automation, robotic integration, scalability

COII2024CSE054

An Efficient Object Detection and Tracking Utilizing Cutting-Edge Deep Learning Methodology

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Abstract: The identification and monitoring of objects in computer vision systems is a crucial and demanding subject. The usage of object identification and tracking is common in numerous fields, including surveillance, autonomous robot navigation, and vehicle navigation, because to the increased accessibility of computational power and the availability of vast public databases. This article offers a comprehensive examination of the fundamental principles, methodologies, and current progress in the domain of object recognition and tracking, which includes advanced deep learning approaches. Deep learning algorithms have demonstrated exceptional effectiveness in these tasks, allowing for precise and swift identification and monitoring of objects in intricate surroundings. This article presents a detailed overview of object recognition and tracking using deep learning algorithms. It focuses on the underlying processes and procedures employed in these tasks. We examine prominent deep learning architectures, including Faster R-CNN, YOLO, and SSD, and explore its utilization in the field of object recognition. Furthermore, we analyze the usefulness of deep learning-based tracking approaches, such as Siamese networks and correlation filters, in the task of object tracking. Recent computer vision research has focused on prioritizing the detection and monitoring of numerous items in a changing environment. Finally, we will analyse the challenges and potential approaches to object detection and tracking using deep learning.

Keywords: Object, Detection, Tracking, Deep Learning, Surveillance Systems, Computer Vision.

COII2024CSE055

Breaking Boundaries: How is Classroom Innovations Reshaping Higher Education in India?"

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Abstract— This research embarks on a comprehensive exploration of the transformative impact of classroom innovations on higher education in India. The contemporary educational landscape is witnessing a paradigm shift propelled by the integration of cutting-edge technologies and novel pedagogical strategies within classrooms. This study delves into the multifaceted dimensions of this evolution, seeking to unravel intricate ways in which these innovations redefine the boundaries of traditional educational approaches.

The research employs a mixed-methods approach, combining quantitative assessments and qualitative inquiries to capture both the statistical trends and the nuanced experiences of educators and students. By scrutinizing specific innovations such as smart boards, virtual tools, and collaborative learning methodologies, the study aims to provide a detailed account of the "how"- elucidating the mechanisms through which classrooms are undergoing transformative changes.
Furthermore, the research endeavours to uncover the motivations and driving forces behind the widespread adoption of these innovations. It investigates the underlying "why" –delving into whether these changes aim to enhance student engagement, improve learning outcomes, or prepare students for the demands of an ever – evolving global landscape.
The significance of this research extends beyond academic curiosity, offering actionable insights for educators, policymakers, and institutions break free from conventional norms, this study aspires to be a guiding compass, shaping a future where classrooms transcend boundaries, fostering dynamic, inclusive, and technologically advanced learning environments.

Keywords— Academic Evolution, Learning Dynamics, Educational Landscape, Progressive Pedagogies, Technological Reshaping, Student Centric Education, Contemporary Learning, Digital Integration, Academic Transformation.

COII2024ME058

Enhancing Healthcare through Adaptive Manufacturing: A Survey of Emerging Trends and Technologies

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Abstract: As concerns developments in technology, the healthcare industry has always been at the cutting edge and from the invention of vaccines to state-of art medical technology. In recent years, there has been an increasing interest in the implementation of adaptive manufacturing technologies to health care. Adaptive manufacturing, or 3d printing processes involve the creation of three-dimensional objects from a digital file. This kind of technology has the ability to transform healthcare people of industries as it allows the production of personalized medical appliances, prosthetics or even human tissue. This paper will focus on the future trends and technology emerging in adaptive manufacturing that are enhancing healthcare.

Keywords -Healthcare industry, Healthcare industry, Cutting edge Invention, Vaccines, State-of-art medical technology. Adaptive manufacturing,3D printing processes. Three-dimensional objects, Digital file, Personalized medical appliances, Prosthetics, Human tissue.

COII2024CSE059

Impact of Quantum Computing on Cryptography: Tracing Progress, Identifying Challenges, and Safeguarding Information in the Quantum Era

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Abstract— Cryptography and security are experiencing a period of profound change due to the potential for scalable quantum computing. Here we take a look back at how far we've come in our quest to make large-scale quantum computing a reality. We also provide a brief overview of the current cryptographic primitives and the dangers they face. New cryptographic primitives, known as post-quantum cryptography (PQC), are being standardized in an attempt to overcome these difficulties. We talk about the mathematical issues that characterize various types of PQC candidates and how they can withstand an attack from a hostile party with access to a powerful quantum computer. This line of inquiry has occurred with the porting of numerous conventional cryptography primitives to the quantum realm. This is the setting in which we talk about TRNG, Physically Enclosable Function, and Quantum Key Distribution (QKD). We get a sneak peek at the implementation-related vulnerabilities that result from such implementations.

Keywords—Quantum Computing, Cryptography, Post-Quantum Cryptography (PQC), Cryptographic Primitives, Quantum Key Distribution (QKD)

COII2024CSE060

AI Robotic Surgery Assistance

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Abstract — Current limitations in robotic surgery, such as restricted access and surgeon fatigue, impede its potential in complex procedures. To overcome these challenges, we propose the integration of advanced AI algorithms into robotic platforms, aiming to revolutionize minimally invasive surgery. Our particular focus is on enhancing dexterity and providing real-time guidance for delicate interventions like brain surgery. Through our research efforts, we aim to achieve remarkable improvements in surgical outcomes. Specifically, we are targeting a 20% reduction in procedure time, a 15% decrease in complication rates, and a 10% increase in successful outcomes. These advancements will not only enhance patient care but also address the issue of inadequate access to complex surgeries in underserved regions. By integrating AI algorithms into robotic surgery, we are paving the way for a future of collaborative AI-powered systems. This transformative approach holds the

potential to revolutionize global healthcare, ensuring improved surgical outcomes, reduced costs, and wider accessibility for all individuals. Through this integration, we strive to usher in an era of enhanced patient care and increased access to complex surgical procedures.

Keywords— Minimally Invasive Surgery with AI Assistance, AI-driven Robotic Suturing and Tissue Manipulation, AI Safety and Security in Robotic Surgery.

COII2024CSE062

Multiscale Neural Network approach – A Study

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Abstract-Purpose: A neuron's reaction to a sequence of stimuli emerges from intricate interactions involving enzymes, and ions and electrical channels. Late advances in learning have had a methodological and viable effect on cerebrum PC interface research. Among the different profound network structures, convolutional neural networks have been appropriate for spatio-spectral-temporal electroencephalogram signal portrayal learning.
Methodology:This paper presents the methodology of building modules emulating a neural network loop. Emulated activities are qualitatively similar to diseases data set.
Try-outs: We present a Multiscale Convolutional Neural Network approach for vision–based grouping of cells. In view of a Neural Networks acting at various goals, the proposed engineering maintains a strategic distance from the old-style handmade highlight's extraction venture, by handling highlights extraction and arrangement in totality.

Keywords: Neuron, Network, Model, Simulation

COII2024ME063

FINITE ELEMENT BASED VIBRATION AND STABILITY ANALYSIS OF FUNCTIONALLY GRADED ROTATING SHAFT SYSTEM UNDER THERMAL ENVIRONMENT

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Abstract: The present work deals with the study of vibration and stability analyses of functionally graded (FG) spinning shaft system under thermal environment using three nodded beam element based on Timoshenko beam theory (TBT). Temperature field is assumed to be a uniform distribution over the shaft surface and varied in radial direction only. Material properties are assumed to be temperature dependent and graded in radial direction according to power law gradation and exponential law gradation respectively. In the present analysis, the mixture of Aluminum Oxide (Al2O3) and Stainless Steel (SUS304) is considered as FG material where metal contain (SUS304) is decreasing towards the outer

diameter of shaft. The FG shafts are modeled as a Timoshenko beam by mounting discrete isotropic rigid disks on it and supported by flexible bearings that are modeled with viscous dampers and springs. Based on first order shear deformation (FOSD) beam theory with transverse shear deformation, rotary inertia, gyroscopic effect, strain and kinetic energy of shafts are derived by adopting three-dimensional constitutive relations of material. The derivation of governing equation of motion is obtained using Hamilton's principle and solutions are obtained by three-node finite element (FE) with four degrees of freedom (DOF) per node. . In this work the effects of both internal viscous and hysteretic damping have also been incorporated in the finite element model. A complete code has been developed using MATLAB program and validated with the existing results available in literatures. The analysis of numerical results reveals that temperature field and power law gradient index have a significance role on the materials properties (such as Young modulus, Poisson ratio, modulus of rigidity, coefficient of thermal expansion etc.) of FG shaft. Various results have also been obtained such as Campbell diagram, stability speed limit (SLS), damping ratio and time responses for FG shaft due unbalance masses and also compared with conventional steel shaft. It has been found that the responses of the FG spinning shaft are significantly influenced by radial thickness, power law gradient index and internal (viscous and hysteretic) damping and temperature dependent material properties. The obtained results also show that the advantages of FG shaft over conventional steel shaft.

Keywords: Power law gradient index; Functionally graded shaft; Temperature dependent material properties; Viscous and hysteretic damping; Rotor-Bearing-shaft system; Finite element method; Campbell diagram; Damping ratio; stability speed limit (SLS)

COII2024AP064

Nanotechnology along with the tools of RDT can provide sustainable solutions for future. by

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Abstract: Bio-nanotechnology is the term that came in the existence through the combination of various aspects of nanotechnology and biology. In this new emerging field of technology, we applied tools of nanotechnology to give effective, long term and sustainable solution for many biological problems.

Bio-nanotechnology usually involved manipulation of various specific materials that ranges from micrometer (μm) to nanometer (nm) with the machinery of living beings, so that their outcomes are beneficial for the society. Outcomes of above concept helps us "how does the cell act at the molecular level". By using biotechnology at nano-scale we can able to understand the mechanism by which human body or immune system get interact with the foreign particle or pathogens and how these disease are cured easily, cost effective solutions are provided. As well as better drug delivery system can also be designed by using above technique that have high targeting ability and less side affect. The basic idea, behind the combination of two fields is to increase the effective interaction among various bio-susceptible materials and how they can be beneficial for the living beings However; this chapter tries to cover basic techniques of biotechnology along with the principles of biology applied at nano-scale which not only allow scientist to imagine but also they can create a new healthy system that can be used for biological research and make promise with the future to give cheap and targeted drug delivery system that can be more effective and efficient.

Keywords: nanotechnology, biology, micrometer (μm), nanometer (nm), various bio-susceptible materials, ex-vivo, delivery system.

COII2024CSE065

Quantum-Resilient TLS 1.3: Challenges, Solutions, and Future Directions

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Abstract -This paper discusses the significance of integrating post-quantum security measures in TLS 1.3 cryptographic protocol, emphasizing its role in ensuring long-term security against quantum attacks. It highlights the importance of collaboration between researchers, industry stakeholders, and standardization bodies for widespread acceptance and interoperability. The cryptographic algorithms used in TLS 1.3, including AES-GCM, ChaCha20-Poly1305, and secure key exchange algorithms, are discussed for ensuring confidentiality and integrity. Post-quantum security threats to TLS 1.3 are analyzed, and proposed solutions encompass hybrid encryption schemes, development of new post-quantum cryptographic algorithms, and quantum-resistant key exchange protocols. The paper concludes by underscoring the necessity of a comprehensive approach to post-quantum security in TLS 1.3 and cryptographic systems, emphasizing continuous research, collaboration, and adaptation to address evolving cybersecurity threats.

Keywords - TLS 1.3, Post-Quantum Security, Quantum-Resistant Cryptography, Standardization, Cybersecurity

COII2024IT066

A Deep Learning-based review of Optical Character Recognition for Handwritten Devanagari Script

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Abstract- Handwriting recognition is one of the most fascinating and challenging research topics in today's digitalized world, and it has progressed thanks to the use of artificial intelligence (AI) and machine learning (ML). It makes a significant contribution to the advancement of human-machine interaction. Character recognition using Deep Learning (DL) is gaining popularity in the world of computer science. DL offers a large collection of pattern recognition tools that may be used for natural language processing, picture processing, and speech recognition, as well as a remarkable capacity to solve challenging ML issues. This research uses the most appropriate strategies to improve recognition rates and configures a

Convolutional Neural Network (CNN) for effective Devanagari character recognition (DCT). To improve efficiency and accuracy, DL can focus on certain elements of a picture for character identification.

Keywords: Optical character recognition, Deep Learning, Convolutional Neural Network, Devanagari character recognition

COII2024CSE067

AI-powered Early Detection and Risk Assessment in Skin Cancer

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Abstract -Skin cancer is a prevalent and potentially life-threatening condition, emphasizing the critical need for early detection and risk assessment. This research explores the application of artificial intelligence (AI) in dermatological diagnostics, specifically focusing on the early detection and risk assessment of skin cancer lesions. Leveraging a dataset of annotated skin images, a sophisticated AI model was developed using deep learning techniques. The model exhibits promising accuracy in identifying malignant lesions and incorporates a risk assessment framework to stratify identified cases. The results indicate significant advancements in early detection capabilities.This paper discusses the methodology, key findings, challenges, and future directions in the integration of AI for skin cancer analysis.

Keywords -Skin Cancer, Dermatological Diagnostics, Artificial Intelligence, Early Detection, Risk Assessment, Image Analysis, Clinical Decision Support, Medical Imaging.

COII2024CE068

Effect of Pollution and contamination on engineering properties of expansive soils

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ABSTRACT: Expansive soils are already declared as problematic soils on account of their typical Swell-Shrink behavior which is attributed to presence of certain minerals in the soil

such as Montmorillonite. Pollutants and contaminants are already showing their ill effects on overall environmental conditions on account of various human activities around. The process of industrialization is a single human activity which is mostly responsible for creation of pollutants and contaminants and is creating indelible carbon foot print. Various soil types cannot remain untouched from such phenomenon of pollution and contamination. Our aim is to examine effect of soil contamination on expansive behavior and other engineering characteristics of expansive soil.

Keywords: expansive soil, contamination, Pollutants, Montmorillonite.

COII2024ME069

An overview on Taguchi's method employed for product quality improvement and its control

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Abstract: Genich Taguchi ,a Japanese engineer and statistician developed methodology for the improvement and control of the quality of produced goods. His robust optimization technique is widely used in the field of quality improvement and experimental design. Taguchi's approach aims to improve the quality of products and processes by minimizing variation and reducing the sensitivity of a system to various factors. The statistical approach for quality is valid for the various areas of engineering such as product design and development, life-sciences and management fields (basically advertising and marketing).Taguchi's statistical approach is incorporated by the various technique "concept of loss function" and "offline quality control". He offered a special mathematical relationship between performance and expected harm (Loss) ,this is explained by the "concept of the loss function". Taguchi's method has been widely applied in various industries, including manufacturing, engineering, and design, to optimize processes, reduce variation, and enhance product quality. It provides a systematic and efficient approach to experimentation and optimization, helping organizations achieve higher levels of quality and performance while minimizing costs.

Key Words: Quality, concept of loss function, Product design, system design.

COII2024CSE070

A Methodological Framework of Containerized Microservices Orchestration and Provisioning in the Cloud: A Case Study of Online Travel Platforms

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Abstract- Cloud computing and Microservices are new paradigms in the new technological era. Due to functionality and modularity, many existing cloud applications are designed as microservices. This transformation to microservices is facing challenges for infrastructure orchestration. Integrating these combined technologies into the online travel platform is a great initiative and will bring the travel industry in a new direction. On the existing online travel platform, booking flights, hotels, and rental car facilities faces problems during the seasonal period when a large number of users hit the system. Integrating microservices and cloud computing can make the system scalable, flexible, and high-performance in processing requests. The microservices architecture breaks down the large program into smaller modules that can run independently and provide individual results with self-contained services. In microservices, each service is responsible for an individual responsibility, and it is also more suitable to build, deploy, and scale independently. The research utilizes a case study methodology to conceive, build, and implement a microservices architecture for online travel services. Technologies like containerization and orchestration are used in the construction of this architecture. The paper analyzes the efficiency of containerized microservices, and an analytical comparison is shown of the existing monolithic architecture. In addition, the research investigates the scalability, agility, resource usage, fault tolerance, and overall system performance advantages and downsides that are connected with adopting containerization and orchestration for online travel platforms.

Keywords- Kubernetes, Online travel platforms, Microservices architecture, Containerization, Orchestration, Cloud computing

COII2024CSE071

Neuroimaging-based Machine Learning for Autism Spectrum Disorder Classification: A Review of Methods and Challenges

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Abstract -Autism spectrum disorder (ASD) is a complex neurodevelopmental disorder that affects communication, social interaction, and behavior. Neuroimaging studies have identified structural and functional differences in the brains of individuals with ASD compared to typically developing individuals. Machine learning techniques can be used to classify ASD based on neuroimaging data. However, there are several challenges associated with this approach, including the selection and preprocessing of neuroimaging data, the choice of machine learning algorithm, and the potential for overfitting and bias. In this

review, we discuss the current state of the art in neuroimaging-based machine learning for ASD classification, including the methods used for feature selection and extraction, the machine learning algorithms employed, and the challenges and limitations of this approach. We also highlight the need for further research in this area to improve the accuracy and reliability of ASD classification using neuroimaging-based machine learning.

Keywords -Autism spectrum disorder, neuroimaging, machine learning, classification, feature selection, preprocessing, bias, overfitting, challenges.

COII2024CSE072

Chronic Disease Detection - Navigating Future Frontiers and Addressing Challenges

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Abstract -This research paper emphasizes the importance of early detection in managing chronic diseases like heart disease, cancer, diabetes, and respiratory illnesses. Personalized treatment plans and proactive lifestyle changes facilitated by early detection can have a positive impact on individual well-being. The paper provides evidence-based recommendations for the implementation of early detection strategies, analyzing case studies and research studies that demonstrate the benefits. It discusses the potential of emerging technologies, such as artificial intelligence and continuous monitoring devices, in revolutionizing disease detection and calls for continued research, interdisciplinary collaboration, and resource allocation to fully realize the benefits in routine clinical practice.

Keywords - Genomic data, Chronic diseases, Early detection, Personalized treatment, Healthcare outcomes

COII2024CSE073

Dynamic Blockchain-facilitated IoT Communication

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Abstract-Recent strides in blockchain-based cryptocurrency technology have notably bolstered trust and security across diverse daily applications. Conventional blockchain design guarantees enduring, anonymous, and verifiable decentralized financial service systems, fostering substantial trust. Nevertheless, integrating blockchain technology into IoT (Internet of Things) systems poses multifaceted practical hurdles. This article endeavors to delineate these challenges and introduces a dynamic blockchain-driven trust mechanism to facilitate a flexible and responsive communication infrastructure within IoT networks. Furthermore, the

authors offer a case study to tackle security apprehensions and proffer suggestions for prospective research.

Keyword - Cyber security,Privacy-Preserving Techniques, IoT, Blockchain.

COII2024CSE074

A Smart Roads: Utilizing Convolutional Neural Networks for Traffic Sign Recognition and Analysis

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Abstract: In recent years, there has been continuous research conducted in the domain of traffic sign detection and identification. In the field of autonomous driving, which is essential for driverless cars, there has been a notable increase in road accidents resulting from a lack of knowledge about traffic signs and rules. This is frequently used to designate enduring or temporary road signs that are shown on the side of both brief and extended routes. Machine learning (ML) is the application of algorithms to facilitate computer systems in analyzing and resolving real-world problems by acquiring knowledge from data. The machine learning models that have been developed are applied across several management and research fields. One instance of machine learning technology in the automotive industry is advanced driver assistance systems (ADAS), which incorporate functionalities like traffic sign recognition. The deployment of automated traffic sign recognition and identification is essential given the growing prevalence of autonomous cars and the rising demand for sophisticated vehicle intelligence. Neural networks may be employed to analyze photos of traffic signs, allowing autonomous automobiles to make intelligent decisions. Machine learning is executed by employing computer systems called neural networks. The objective of this research is to create a machine learning model using convolutional neural networks (CNN) that can effectively and reliably identify traffic signs. The objective of this concept is to facilitate decision-making for autonomous vehicles.

Keywords: Traffic Sign, Detection, Classification, Convolutional Neural Networks, Computer Vision.

COII2024CSE075

APPLICATIONS OF ARTIFICIAL INTELLIGENCE IN FAULT DETECTION AND PREDICTION SYSTEMS

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Abstract - The paper discusses how innovative technology, such as sensors and intelligent devices, plays a crucial role in enhancing process monitoring and control in various production settings. Practitioners focus on developing models and techniques for real-time detection of process anomalies and equipment faults. The reliability of sensors and monitoring systems is critical for data-driven analysis and decision-making processes. Therefore, there has been exploration into approaches aimed at recognizing failure mechanisms in industrial measuring devices and sensor systems. The paper aims to analyze the existing literature regarding the detection and diagnosis of faults or failures in sensors and monitoring systems, with a specific focus on exploring the practicality of using sensors and artificial intelligence algorithms in data-driven models. Traditional methods of fault detection and prediction can be time consuming
and prone to errors. Therefore, artificial intelligence techniques such as machine learning and data analytics have emerged as powerful tools for automating the process of fault detection and prediction.

Keywords - Fault detection, Fault prediction, Artificial Intelligence (AI), Machine learning (ML)

COII2024CSE076

Diabetic Retinopathy Detection using: Machine Learning Approach

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Abstract—The issue of Diabetic Retinopathy (DR) continues to be of great concern due to its capacity to result in permanent vision loss. The objective of this paper is to tackle the problem above through a comprehensive analysis of persons suffering from Diabetic Retinopathy (DR). The primary aim is to develop a reliable machine-learning model that can accurately forecast the emergence of symptoms in affected patients. By employing machine learning methodologies, to efficiently detect and rectify this situation. The suggested approach entails employing a Convolutional Neural Network (CNN) to examine retinal pictures, to precisely categorize the existence and extent of Diabetic Retinopathy (DR). By undergoing rigorous training using a wide range of data, this system exhibits a notable level of expertise in identifying tiny abnormalities in the retina that are suggestive of the initial phases of Diabetic Retinopathy (DR). The utilization of automated diagnostic techniques in diabetic eye care presents a potential opportunity to facilitate prompt treatments, eventually resulting in enhanced patient outcomes.

Index Terms—Diabetic Retinopathy, CNN, PDR, Machine learning.

COII2024IT077

A Highly Efficient Image Captioning System Based on Deep Learning

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Abstract - The growing prevalence of social media platforms has led to a significant adoption of picture captioning techniques, which automatically generate descriptions for photos using terms from natural language. The work of picture captioning is highly significant in the domain of computer-based civilization. Image captioning is a very efficient procedure in this domain, enabling computers to comprehend the content of images by employing one or more descriptors. The rendering process must possess the capability to not only identify objects and events, but also comprehend occurrences, behavioral patterns, and the interconnections among these entities. Image captioning is an engaging and intricate activity with several applications, such as storing, organizing, and arranging visually appealing photographs. This programme possesses the capability to transform captions into visual representations, rendering it particularly well-suited for handling substantial quantities of data. The goal of picture captioning is to effectively combine visual and verbal information, resulting in a more comprehensive comprehension of the subject shown in the image. This paper gives a complete investigation of complex strategies in photo captioning, spanning neural network designs, attention processes, and assessment measures. Performed an examination of the challenges faced, evaluated several approaches, and offered insightful viewpoints on potential future strategies to improve the advancement of photo captioning software.

Keywords - Image Captioning, Deep Learning, Image Description, Text Generation, Neural Image, Vision.

COII2024CSE078

Emerging Cloud Computing Technologies In Education Sector During COVID-19 Pandemic Time

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Abstract: This investigation underlines the worldwide effect on the student learning through electronic devices and services during COVID-19. The execution of complete or partial lockdown and social removing has been upheld as one of the preventive measures to spread the Covid disease that has brought about the total loss of motion of worldwide exercises. Particularly the instructive framework that is totally shut and to reformulate with the scholastic educational plan, there is a move from the standard learning cycle to e-learning. This can be refered to with a sheer volume of online sessions, gatherings, and so forth It very

well may be seen that the world is totally subject to data innovation during this emergency. Thusly, the current examination gives an understanding into the e-learning cycle and its benefits alongside the refreshed rendition of its utilization. As far as anyone is concerned, there have been not many logical reports on this specific circumstance of the effect of e-getting the hang of during COVID 19. The current examination is an arrangement of the segments of the e-learning instruments and the current as well as future implications of cloud technology and data science in various sectors.

Keywords: E-learning, COVID 19, Global platform, Google apps, Online learning, Cloud technology

COII2024CSE079

A Comparative Study of Open-Source Drone Flight Controllers for Unmanned Arial Vehicles

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Abstract: The ongoing transformative advancements in civilian drone (Unmanned Arial Vehicles) applications have spurred a heightened demand for research and development in UAV technology. Current focal points of investigation revolve around the properties of UAV platforms, including functionality, reliability, fault tolerance, and endurance. These attributes are intricately tied to the hardware and software of UAV flight controllers. However, the absence of standardized flight controller architectures, coupled with the prevalence of proprietary closed-source controllers on numerous UAV platforms, introduces complexities. Developing solutions for one flight controller may prove challenging to seamlessly transfer to another, necessitating significant additional development and testing efforts. The adoption of open-source flight controllers serves as a viable strategy to address these challenges, facilitating collaborative research and validation by enabling other researchers to build upon existing work. This paper presents a comprehensive survey of publicly available open-source drone platform components conducive to research and development. The survey encompasses open-source hardware, software, and simulation drone platforms, offering a comparative analysis of their principal features.

Keywords: Unmanned Aerial Vehicle (UAV), Drones, Flight Controllers, Drone Simulators, Open Platforms, Survey.

COII2024AS080

An Introduction of Game Theory using Its Application

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Abstract: The research paper describes the basic concepts of "Game Theory "by using the historical background of game theory. This topic focuses on the appropriate definition of

relevant terms that will be used to this theory like a game, nash equilibrium, and dominance which form the basis of the theory concept. This concept also covers mixed strategies, extensive games with both perfect and imperfect information,auction bidding, and their relevant practical application of the concept as applied in the field of economics.

Keywords: Game theory, Zero-sum game, Nash equilibrium, Economics.

COII2024AS081

Thermophysical Study of Poly (propylene glycol) monobutyl ether340 (PPG MBE 340) with Toluene, Benzene and Benzyl alcohol

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Abstract: Binary mixtures of Poly (propylene glycol) monobutyl ether 340 (PPGMBE 340) with toluene, benzene and benzyl alcohol using density, viscosity and refractive index data at varying temperatures and concentrations. The excess molar volume (VmE), deviation in viscosity (Δη) and deviation in molar refraction (ΔRm) and many other derived parameters such as optical dielectric constant (ε), polarizability (α) and interaction parameter (d) at varying concentrations of PPGMBE340 have also been calculated. Results have been analyzed in the light of molecular interactions between like and unlike molecules with respect of their polarities.

Keywords: Molecular interaction, excess molar volume (VmE), deviation in viscosity (Δη), deviation in molar refraction (ΔRm), optical dielectric constant (ε)

COII2024EE082

Electronics Role in Enhancing Human Health Wellness

by
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Abstract: Electronics have become an important component of established and commonly used medical innovations around the globe. Patient monitors to diagnostic imaging systems and infusion devices, the use of electronics is extensively increased.
Microelectronics come with the capability to scale down the machinery inside the devices, which further proves useful because manufacturers endeavor to meet the demands of technology clients. This normally needs them to be comfortable and trouble-free while carrying out a range of functions.
In this paper, we will try to look at few of the popular medical innovations that depend on the latest electronic and electrical components to effectively progress patient livelihood.

Keywords: Electronics, healthcare, patient, diagnostics

COII2024IT083

A Brain Tumor Identification and Classification Utilizing Deep Convolutional Neural Network

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Abstract - The human brain is an essential organ, and the existence of brain tumors can result in significant repercussions such as memory loss, visual impairment, and challenges in name recall. Early detection of brain tumors is essential for reducing their occurrence and enhancing patient outcomes. Computer vision researchers have utilized several methodologies to precisely identify and categorize brain tumors. Nevertheless, this procedure remains a formidable undertaking due to several considerations. The challenges revolve on factors such as the dimensions, form, position, and recognition of crucial characteristics in the tumor's imaging data. Furthermore, the task of examining MRI brain images to identify brain cancers is a highly intricate endeavor. There has been an increasing fascination with multimodal medical image analysis in recent years. In this context, "modalities" refers to different viewpoints of MRI brain imaging, such as the axial, sagittal, and coronal planes. This work recognizes the frequent situation in medical image analysis when not all modalities are accessible for every sample, which deviates from the assumption prevalent in most of the research on analyzing multimodal data. In order to tackle these difficulties, the research proposes a novel strategy: use a combination of DCNN to identify and classify brain cancers across various imaging techniques. The model underwent additional refinement and training by using pre-existing weights from the "brucechou1983_CheXNet" model, which was especially designed for the purpose of detecting brain tumors. When utilized on the figshare brain-tumor-dataset, the suggested method attained a remarkable accuracy rate of 98.91%. Subsequently, the XGBoost algorithm was employed, resulting in a substantial increase in accuracy to 99.79%.

Keywords - Image Captioning, Deep Learning, Image Description, Text Generation, Neural Image, Vision.

COII2024ME084

ENHANCEMENT OF HEAT TRANSFER THROUGH FINS

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Abstract: Various industries NOWADAYS use extended surfaces, better known as fins, to increase the heat transfer rate wherever required. Fins are easy to construct and provide more effective heat transfer when used. The heat transfer through fins depends upon several parameters that are obtained from several experiments by different researchers. Factors such as the number of fins, geometry and spacing, fin thickness and material to be used, and the environment of an application decide the overall functionality of the fins. Moreover, surface operations such as perforations can further increase the fin effectiveness by substantially increasing the heat transfer rate. Also, along with actually reducing the weight of an individual fin, this can increase the surface area engaged in the heat transfer process without having to alter its dimensions. So, in this paper, various parameters have been discussed that are responsible for the enhancement of the overall performance of the fins.

Keywords: Heat transfer, effectiveness, perforations, geometry, fins.

COII2024AS085

Advances in Utilization of Plastic waste for the synthesis of Carbonaceous Materials

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Abstract:- Plastics have been a wonder material but the pollution associated with improper disposal of plastics has been a global concern .Plastic pollution is being debated globally and several way outs & alternatives are being proposed. Plastic waste accumulated in our ecosystem can be minimized by recycling incineration and energy recovery etc. Recently a new approach towards use of waste plastic has been developed where the carbon backbone of plastics is converted into carbonaceous materials like carbon Nanotubes, fullerene etc. The purposes of this review are to outline the progress of research in this direction. The use of carbonaceous materials in water purification applications is also presented in the review paper.

COII2024AS086

.Queuing Theory: An Effort to Improve the Quality Services of a Hotel

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Abstract— Queuing theory is the mathematical study of waiting lines, or queues. In queuing theory a model is constructed so that queue lengths and waiting times can be predicted. The common problem arises in almost every famous hotel is that they lose their customers due to a long wait on the line. This shows a need for a numerical model for the hotel management

to understand the situation better. This paper aims to show that queuing theory satisfies the model when tested with a real-case scenario. Authors obtained the data from a Hotel in Lucknow in order to derive the arrival rate, service rate, utilization rate, waiting time in queue and the probability of potential customers to balk. The collected data is analyzed by using Little's Theorem and M/M/1 queuing model. The arrival rate at Hotel Lucknow during its busiest period of the day is 3.25 customers per minute (cpm) while the service rate is 3.27 cpm during our study period. The average number of customers in the hotel is 210 and the utilization period is 0.993.

Keywords: Queuing theory, Little's Theorem, Kendall's notation, Waiting Lines.

COII2024ME087

RELIABILITY ANALYSIS & PREDICTION OF MEAN TIME BETWEEN FAILURE OF FLIGHT DATA RECORDER

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Abstract— Flight data recorders also known as Black Box are used on military & civil aircraft to record the parameters of flight duration. It provides the data for post flight analysis and analysis for investigation, if there is any accident or incident that happened during flight. Criticality of application of this unit requires data to be available for post-accident analysis through Ground Replay Equipment to ascertain the cause of accident; hence there is a requirement to have a reliable product. Also Flight Data Recorders are used as Health Monitoring devices for the Sensors data / Engine performance and analysis of flown Flight envelope for Pilots briefing & de-briefing. Flight Data Recorders perform two operations during its functioning:

- Acquisition of data
- Recording of data in non-protected memory as well as in crash protected memory.

. Prediction using MIL-HDBK-217F assumes a serial relationship between parts of the system, in which failure of any part constitutes system failure. The model assumes that:

- All parts are in constant failure rate proportion of their lifetime.
- Infant mortalities have been removed by component screening, electrical test, burn-in etc., and
- Wear-out has not been reached.

"Reliability Analysis & Prediction of Mean Time between Failures (MTBF) of Flight Data Recorder" concludes that the **Failure Rate of the system works out to be 197.92 Failures / 106 Hrs. i.e. Mean Time Between Failure of 5052.5hrs.**

COII2024CE088

Designing for Accessibility: Inclusive Architecture for All - A Perspective on India

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Abstract: This article presents a comprehensive exploration of the concept of inclusive architecture in the context of India, probing its implications, current status, challenges, and future prospects. Inclusive or accessible design is positioned as not merely a building standard but a societal necessity, given the considerable portion of India's population that experiences some form of disability. The study traverses the historical progression of architectural practices in India, the evolution of accessibility, and the contemporary relevance of inclusive design. A closer examination of current accessibility standards and notable accessible buildings within India reveals both progress and gaps. Insights from disability demographics and the impact of the physical environment on individuals with disabilities emphasize the urgent need for inclusive design. The study further scrutinizes existing regulatory frameworks, international standards, and their applicability to the Indian context. The article emphasizes the profound social and economic impact of inclusive design and its potential to transform urban landscapes and city planning. It discusses the integral role of education and technology in promoting inclusive design and showcases various case studies of successful inclusive architectural applications within India. The piece concludes with reflections on the future of inclusive architecture in India, highlighting emerging trends, opportunities, and potential challenges. In the final reckoning, the importance of further research and implementation of accessibility guidelines is underlined. This in-depth exploration advocate for a robust commitment towards inclusivity, setting the stage for an architectural landscape that is truly representative of all members of society.

Keywords: Inclusive Architecture, Accessible Design, Universal Design, Disability, Indian Architecture, Accessibility Standards, Regulatory Frameworks, Social Impact, Economic Impact, Urban Planning, Architectural Education, Technological Innovation, Future Trends, Challenges and Solutions, Research and Implementation, Accessibility Guidelines, Public Buildings, Residential Projects

COII2024AS090

Gender stereotyping in management and decision-making process in an organizational set up

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Abstract: Gender norms in Indian Society are reinforced through socio-cultural institutions like family, kinship, religious and economic institutions and many more. When a child is born the first expression would be about gender of the baby which decides the emotions of the family members carried on with various rituals, food consumption and sharing household chores. By the beginning of the twenty-first century, however, this picture had changed dramatically. Women established their own identity and paved the way in education and the workplace. Educational institutions began preparing women for entry into new fields, allowing them to depart from traditional roles. Families began to expect women not only to

pursue higher education, but also to pursue any career interests they may have. With this intention the major objective of the study is to To understand the attitudes about women's role in organization and to delve into the attitude towards gender stereotyping. For this study, the researchers extensively used both primary and secondary sources of information. The primary data was collected through interviews with women currently residing in the city of Bangalore and working in Information Technology Sector. Primary and secondary data were collected to cover each aspect of the investigation. The data was added based on the evolving requirements of the research. Based on a convenience sampling method 500 married women were selected for the study. After Data Collection the data were entered, edited, coded and analysis was done using SPSS. The results were analyzed and interpreted.

Keywords: Gender stereotype, decision making, Gender Bias, prejudices and discrimination

COII2024IT092

A Very Efficient Research Paper Recommender System Utilizing the Clustering Approach

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Abstract: The number of research publications being published is consistently increasing on a daily basis. Researchers sometimes encounter difficulties while endeavoring to comprehensively analyze all research publications within their specific field of study in order to locate pertinent studies that may offer guidance for their own research. The recommender system aids scholars by proposing articles based on assessments supplied by other academics within the same domain. Collaborative filtering is a very efficient method utilized in the development of recommender systems, and it is extensively utilized in several commercial recommender systems. Unfortunately, the computational complexity of these methods grows in direct proportion to the number of users and items, which, in typical research scenarios, can reach several million. In order to address these issues related to scalability, we suggest implementing a proficient recommender system that makes use of subspace clustering. This approach entails examining the researcher-paper matrix to ascertain the correlations among different researchers. By using these relationships, we may offer a well selected compilation of research articles for recommendation.

Keywords: Collaborative Filtering, Recommender System, Subspace Clustering, Hash Table,Model-based Systems.

COII2024CSE094

VOICE BASED EMAIL FOR VISUALLY CHALLENGED PEOPLE

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Abstract:- Internet access is one of the most basic amenities of daily living. Everybody utilizes the data and facts found on the internet. Conversely, blind individuals find it challenging to use text- based services. The development of computer- based portable systems has given the blind and visually impaired access to a wide range of opportunities worldwide. People who are blind can use online apps much more easily with the help of screen readers, which provide an auditory response based virtual world. This project presents the architecture of a voicemail system that makes it simple for a blind person to access emails. Through the use of computers, research is helping blind people send and receive voice-based mail messages in their own language.

Keywords: Voice based mail, Screen readers, gTTS.

COII2024CSE095

"Transforming Higher Education: A Comprehensive Study on the Integration and Impact of Admission Inquiry Chatbots"

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Abstract: The evolution of technology has significantly impacted various aspects of our lives, including the education sector. With the increasing demand for streamlined admission processes, institutions are exploring innovative solutions to improve the overall user experience for prospective students. This research paper delves into the implementation of admission enquiry chatbots as a means to enhance user interaction, provide instant information, and facilitate a seamless admission process.

Keywords: Admission processes, chatbots, higher education, user experience, technology adoption.

COII2024CSE101

"Exploring Inequities in Kidney Failure Among Adults: Insights from a Comprehensive Meta-Analysis on Sociodemographic Disparities"

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Abstract-This research paper delves into the nuanced sociodemographic disparities prevalent among adults diagnosed with kidney failure. Drawing upon an extensive meta-analysis of existing studies, this paper seeks to provide a comprehensive understanding of the

multifaceted factors contributing to these inequities. By synthesizing data from diverse sources, we aim to uncover patterns, identify risk factors, and offer insights that can inform targeted interventions to address the disparities in kidney failure outcomes.

Keywords : Kidney failure, Sociodemographic disparities, Adults, Meta-analysis, Inequities, Health disparity, Risk factors, Age, Gender, Race/ethnicity, Socioeconomic status, Geographic location, Prevalence, Outcomes, Literature review, Methodology, Statistical analysis, Subgroup analyses, Discussion, Intervention, Policy changes, Public health, Access to healthcare, Genetic predispositions, Environmental factors.

COII2024CSE102

MOVIE RECOMMENDATION SYSTEM

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Abstract -A movie recommendation system is an intelligent platform designed to suggest films to users based on their preferences, behavior, and historical data. The system operates through complex algorithms that analyze various factors, such as genre, cast, director, user ratings, and viewing history, to generate personalized movie suggestions. At its core, the recommendation system employs collaborative filtering techniques, where it identifies patterns among users with similar tastes to make predictions for individuals. This method includes user-based filtering, which recommends movies liked by users with comparable tastes, and item-based filtering, suggesting movies similar to ones the user has previously enjoyed. Moreover, the system often integrates machine learning models that continuously learn and adapt based on user interactions, providing more accurate and personalized recommendations over time. These models may include matrix factorization, neural networks, or deep learning algorithms, optimizing suggestions by understanding implicit user preferences. Privacy and ethical considerations are integral in these systems, ensuring user data protection and transparency in the recommendation process. Overall, a movie recommendation system aims to enhance user experience, streamline content discovery, and increase user engagement by offering tailored suggestions, ultimately enriching the entertainment journey for audiences worldwide.

Index Terms - Recommendation System, Personalization , Machine Learning, User Preferences

COII2024AS104

Challenges and Opportunities of Millets for Health in Present Sanarri

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Abstract- World is in the clinch of several health disorders and chronical diseases. As per 2016 Global Nutrition report, 44% population of 129 countries experience very serious levels of undernutrition, adult overweight and obesity . A nutrient imbalanced diet is responsible for most of these diseases. According to the estimates of United Nations Food and Agriculture Organization, about 795 million people were reported undernourished. While on the other hand more than 1.9 billion (39% of world's population) adults ≥ 18 years of age were overweight and further 13% were reported to be obese.
Millets was one of the earliest cereal crops to be included in the human diet. Millets was domesticated as a source of human food but over time it's diverse uses has evolved over the years. There has been considerable recent interest in the nutritional properties of millets, which has stemmed largely from the discovery of the cholesterol lowering effect of B - glucon, a cell wall polysaccharide found in millets. The action of B-glucon, in inhibiting absorption from the gut, probably through increased viscosity provides for the benefit in reducing post-prandial blood sugar levels. The overall importance of millets as a human food is very much appreciated owing too much potential of the health benefits of the whole grain and source of Beta glucans and adaptability of Millets has been recognised to a wide range of environments in comparison to other cereal crops. Millets secure sixth position in terms of world agricultural production of cereal grains and are still a staple food in many regions of world. These are rich source of many vital nutrients Millets are to be helpful with the reduction of weight, BMI, and high blood pressure.

Keywords- Millets, Health, Crops, etc.

COII2024CSE107

Industrial Internet of Things and Blockchain for Secure Supply Chain Management to detect Anomalies in 6G

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Abstract: Transparency and security in supply chain management are being improved via the combination of 6G networks and the Industrial Internet of Things (IIoT). The purpose of this study is to address the shortcomings of outdated supply chain management systems and the requirement for instantaneous mode detection of anomalies processes in order to thwart emerging threats. The idea is to use blockchain's immutability for safe transactions and IIoT's driven by data capabilities for real-time monitoring. To guarantee supply chain transaction safety, a comprehensive system design is needed, which includes incorporating blockchain technology, putting IIoT devices into place, and coordinating smart contracts. To find problems in the 6G environment, an anomaly detection technique integrates feature extraction, data pre-processing, and ML model training. Industry practitioners looking for robust delivery solutions in the 6G age can benefit from the study's theoretical contributions and practical insights into blockchain and IIoT integration.

Keywords: IIoT, supply chain management, blockchain, security, anomaly detection, and 6G.

COII2024CSE108

Relevance Of Applications In Social Behaviour change Communication

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ABSTRACT :In the contemporary world, women have demonstrated their indispensable role in society, making diverse and multifaceted contributions that are equally vital. It is imperative to acknowledge their importance as it is essential for fostering equality, well-being, and progress for all members of the community. However, when we make a comparison with rural areas, the empowerment and well-being of women often remain obscured by cultural taboos and stigmatization, hindering their ability to advocate for their rights. This is particularly evident in areas related to menstrual health, where it may not be immediately evident that women who menstruate encounter numerous challenges. Some of these challenges may appear unrelated, such as mental health, yet menstruation exerts a significant impact on it. Menstrual Health Management (MHM) plays a crucial role in the overall well-being and quality of life of women who menstruate. This research paper explores various aspects of MHM, aiming to provide insights into effective strategies for promoting menstrual health, reducing stigma, and improving access to necessary resources via a medium that can be provided to those with fewer facilities and a less understanding environment. Overall, this research paper aims to contribute to the ongoing dialogue on Menstrual Health Management, offering valuable insights to researchers, policymakers, and organizations who are working towards Menstrual Hygiene and well- being for all.

COII2024AS112

STUDY THE ANTIMICROBIAL PROPERTIES OF SEVERAL Cymbopogon Flexuosus SPECIES.

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Abstract: In light of the growing problem of antibiotic resistance, there has been a marked increase in the investigation of naturally occurring substances that possess antibacterial characteristics. Amidst the plethora of plant species celebrated for their medicinal properties, Cymbopogon flexuosus, or lemongrass (Krishna), stands out as an intriguing contender with

many uses. Exploring the chemical makeup, historical relevance, and the increasing need for alternative antimicrobial agents due to expanding resistance, this introduction seeks to clarify the reason for exploring the antimicrobial characteristics of different Cymbopogon flexuosus species. This paper examines the antibacterial capabilities of several species of Cymbopogon flexuosus.

Keywords: Cymbopogon flexuosus, Antimicrobial, Plant, Antibiotic, Resistance.

COII2024CE113

Enhancement in strength parameter of clayey soil using Sodium chloride as admixture

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Abstract: Most of the problems in front of civil engineers arise due to an available site that does not have suitable engineering properties to support structures, like railway tracks, roads and foundation & dams etc. The soil at site may be not usable due to a number of causes. A difficult situation occurs in work exists when the soil is found to be clay or the water table is high in that
region. Soils having a high percentage of clay normally serve low shear strength and have tendency to swell and shrink with their moisture content variation. For these reasons clayey soil is not suited for structures, like railway tracks, roads and foundation & dams etc. Engineering properties of clayey soil can be enhanced by adopting different ways of soil stabilization. Stabilization is the process of physical and chemical alteration of soils to enhance their engineering properties and thus improving the load bearing capacity of a sub-grade or a sub-base
to support pavements and foundations. Sodium chloride has been used for many years as a stabilizing admixture in selected base course materials. Sodium chloride as admixture added to
virgin soil was found to have negligible effects on soil plasticity while increasing compacted density and decreasing optimum moisture content. In this project, the stability of soil is found out by adding Sodium chloride (NaCl) and thus compared with the stability of soil without adding Sodium Chloride (NaCl) followed by different laboratory tests.

Keywords: Soil Stabilization, Clayey Soil, Sodium Chloride, Admixture.

COII2024CS114

Investigating the integration of Machine Learning methods with IIOT devices and systems

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Abstract: Over the past decade, machine learning and deep learning algorithms have been developed and utilized in various applications, including computer vision, natural language processing, and automated speech recognition. These technologies are crucial in real-time embedded systems and IoT devices like autonomous vehicles, drones, and security robots. However, as IoT applications expand, cyber-attacks targeting these systems increase. ML systems play a vital role in identifying abnormal behavior and understanding long-term trends. Continuous monitoring, correction, and supervision are essential for data analysis effectiveness. This article introduces algorithms for monitoring perishable goods, leveraging IoT and machine learning technologies to address these challenges.

Index terms: Machine Learning, IOT, and Accuracy, Data analysis, Data Science

COII2024CE115

The Future of Affordable Housing in India: Innovations in Architecture and Civil Engineering

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Abstract: India's quest for affordable housing is a critical socio-economic challenge, driven by rapid urbanization. The complexity of this issue is amplified by limited urban space, financial constraints of low and middle-income groups and regulatory hurdles. This article will find out innovative architectural and civil engineering solutions being developed to mitigate these challenges. It highlights approaches in design, materials and construction methods to make housing more affordable. Key innovations include the use of sustainable locally sourced building materials, the adoption of space-efficient designs and the integration of advanced technologies like modular construction and 3D printing. The article also explores how these solutions are being practically applied in various Indian contexts providing a hopeful outlook on the potential to transform India's urban landscape with affordable, inclusive and sustainable housing solutions.

Keywords: Affordable Housing, Local building materials, Architectural Innovations, Civil Engineering innovations, Modular Construction, Community-Centric Design, Urban Migration, Inclusive Design, Participatory Urban Planning

COII2024CE116

Abrasion Resistance of Hooked Steel Fiber Silica Fume Concrete Using Recycled Aggregate

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Abstract: In present experimental study, the effect of silica fume and hooked steel fiber in concrete on abrasion resistance is investigated. Six concrete mixtures containing 0, 5,7.5, 10, 12.5, and 15% silica fume as cement replacement in mass basis were prepared. Another, four fiber-reinforced ordinary Portland cement (OPC 43 grade) concrete mixtures containing different fiber content (0 to 1.25 %) were prepared for hooked steel fiber in volume basis and 10% by replacing with cement mass basis were prepared for recycled aggregate. Water-cement/cementitious ratio was kept constant in all the concrete mixes. Compressive strength, flexural strength and surface abrasions of the concrete mixtures were measured at 28 days. The results of the laboratory work showed that replacement of cement with Silica Fume increase abrasion resistance, compressive strength, flexural strength and split tensile strength of concrete. Addition of hooked steel fiber improved the abrasion resistance of concrete. The comparison between the relation of abrasion to compressive strength and abrasion to flexural tensile strength, made in terms of R2 of the linear regression on log scale, showed that a stronger relation existed between abrasion and flexural tensile strength than between abrasion and compressive strength of the concrete containing either silica fume or silica fume and fibers both.

Keywords: Flexural Strength, Abrasion Resistance, Silica Fume, Hooked Steel Fiber, Experimental Studies, Recycled Aggregate

COII2024CSE117

Automated Earthquakes Monitoring and Alerting System Based on 4.0 IR

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Abstract—an earthquake is a sudden shift of the earth's surface. An earthquake occurs when two parts of the earth's surface suddenly move about one another along a fault line due to tectonic forces. Quakes, also known as tremors or earthquakes, are caused by an abrupt release of energy in the earth's crust. Earthquakes are recorded with seismographs, also often called seismographs. Traditionally, the moment magnitude of an earth- quake is measured, or its associated, but now mostly outdated Richter magnitude; earthquakes with a magnitude of three or less are essentially undetectable, while those with a magnitude of seven can cause catastrophic damage over huge areas. The intensity of the ground tremble is measured using the modified Marcella scale. Seismic events are unpredictable and can cause damage to both people and property. We cannot stop it when it strikes unexpectedly, but we can be warned. Several technologies are available now to detect minor tremors and knocks so that we can take action before more significant earth vibrations occur. This study uses an accelerometer to find vibrations before an earthquake. The three axes, as well as shakes and vibrations, are extremely sensitive to the accelerometer. Reduced destructive losses are a benefit of utilizing an accelerometer to develop an earthquake detector based on Arduino.

Keywords: Earthquake, Embedded System, Sensors, Disaster, Management, Internet of thing, Aurdino, Accelerometer

COII2024AS118

GREEN HYDROGEN: FUEL OF THE FUTURE

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Abstract: India has announced a target of energy independence by 2047 and a net-zero by 2070, Under the National Green Hydrogen Mission. Green Hydrogen is expected to play a substantial role towards achieving these goals. Green Hydrogen is produced by the process of electrolysis [1], where water is split into hydrogen and oxygen using electricity generated from renewable sources like solar, wind, or hydropower. This process results in a clean and emission-free fuel that has immense potential to replace fossil fuels and reduce carbon emissions. Another method of producing Green Hydrogen is from biomass, which involves the gasification of biomass to produce hydrogen. Both these production methods are clean

and sustainable, making Green Hydrogen an attractive option for the transition to a low-carbon future. Hydrogen is an energy carrier that can transform our fossil-fuel dependent economy into a hydrogen based economy [2], which can provide an emissions-free transportation fuel. But the Hydrogen storage and transport are issues of intense research due to hydrogen's characteristic low density. Is hydrogen a justifiable means to the attainment of an environmentally beneficial transportation fuel when methods of production are not utilizing clean, renewable energy sources? What exactly are the completely emissions-free methods of producing and utilizing hydrogen in transportation? Can hydrogen be the fuel of the future?

Keywords: Hydrogen fuel, PEM Fuel Cell, climate change, Hydrogen economy

COII2024CE119

COMPARATIVE STUDY OF CONCRETE USING CRUSHED OVER BURNT BRICKS, CRUSHED MARBLES AS A FULL REPLACEMENT OF COURSE AGGREGATE

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Abstract: Concrete is one of the most widely used building materials. The raw materials from which it is made are cement and aggregate, both of which contribute to the quality of the construction. Aggregates account for over 70% of the volume, and the cost of construction also depends on the availability of these aggregates. From an environmental point of view, mining natural aggregates restricts the accessibility of groundwater, as well as contributing to atmospheric contamination through the release of dust and slurry particles. This work demonstrates an effort to explore the possibility of using broken bricks, broken balls and broken tiles from flooring work. In this study, several samples were constructed with crushed over burnt bricks, crushed marble and broken tiles as a complete substitute for coarse aggregates, with corresponding workability and compressive strength. Compressive strength was checked and compared to natural coarse aggregate and found that the sample with broken marble has the most compressive strength and the same workability as the other three waste materials.

Keywords: crushed over burnt bricks, crushed marble, compressive strength, workability.

COII2024ME120

"Procedure of development of Biodegradable Electronic Material for Sustainable of Information & Communication Technology (ICT)"

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Abstract: As the global demand for electronic devices continues to surge, the environmental impact of electronic waste has become a critical concern. This review delves into the realm of biodegradable electronic materials, offering a comprehensive analysis of their potential to revolutionize Information Communication Technology (ICT) towards sustainability. It is urgent need for an eco-friendly alternative of electronic material. The review explores the challenges faced in the integration of biodegradable materials, such as performance limitations and scalability issues, and presents the latest advancements aimed at overcoming these hurdles. The review concludes by outlining future research directions and suggesting strategies to accelerate the adoption of biodegradable electronic materials in mainstream ICT applications.

Keywords: ICT, Biodegradable Materials, E-Waste etc.

COII2024ME121

"Mechanical behavior of hydroxyapatite based composites and its coatings on Ti-6Al-4V alloy for orthopedic applications"

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Abstract: Hydroxyapatite (HA) $Ca_{10}(PO_4)_6(OH)_2$ has garnered significant attention in orthopedic research due to its biocompatibility and resemblance to natural bone mineral. This abstract presents a comprehensive overview of the mechanical behavior of hydroxyapatite-based composites and their coatings on Ti-6Al-4V alloy, aimed at enhancing the performance and longevity of orthopedic implants. The mechanical properties of HA-based composites are influenced by various factors including composition, processing techniques, and microstructure. Reinforcement materials such as polymers, ceramics, and metals play a crucial role in tailoring mechanical properties to meet the demands of orthopedic applications. Furthermore, the addition of bioactive substances and growth factors enhances the osteo integration and bioactivity of these composites. Coating HA onto Ti-6Al-4V alloy surfaces serves to improve biocompatibility, corrosion resistance, and osseo integration. The mechanical stability of these coatings is vital for ensuring long-term implant success. Techniques such as plasma spraying, sol-gel deposition and electrochemical deposition are employed to achieve uniform and durable HA coatings on titanium alloy substrates. Characterization methods including tensile testing, compression testing, nano indentation, and scratch testing provide insights into the mechanical behavior of HA-based composites and coatings. Finite element analysis (FEA) techniques are also utilized to predict stress distribution and deformation patterns in implanted devices under various loading conditions. Understanding the mechanical behavior of HA-based composites and coatings is essential for designing orthopedic implants with optimized performance, durability, and biocompatibility. Future research directions may focus on refining fabrication techniques, exploring novel

reinforcement materials, and elucidating the long-term in vivo behavior of these implants for enhanced clinical outcomes in orthopedic surgery.

Keywords: Hydroxyapatite (HAP), Ti-6Al-4V, Finite element analysis (FEA)

COII2024EE123

New Technique for Switched Capacitor based Inverter, based on a Standalone Photovoltaic Module

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Abstract: Inthispaper,wehaveproposedanewtechniqueforSwitchedCapacitorbasedinverterbase donastandalonephotovoltaic module.Thenewtechniqueisbased on PIbased controller.Thepurposeofthiscontrolsystemistosaturateanyfluctuations ofthe output of the solar panel or the standalone PV module and give a clear DC constant input voltage to the main circuit of switched capacitor. The switched capacitor is used to give capacitance value according to the pulses given in the SC (switched capacitor) modulegatesofthetransistorsusedfor switching.ThepossibilityofexecutingMaximumPower PointTrackingwhichistorealize itas ameasurableaugmentation in theefficiencyofthePhotovoltaicSystem. Initially, theSwitched capacitor based driven with P and O MPPTtechniquegives about 4-6% ofTHD output sinewave. In theproposed algorithm, thePand Otechniqueismodified with the use of Fuzzy Controller and PI controller which stabilizes the system, lowers cost and is easier to implement. The THD valuesareimprovedby88%,THD is less than 1%and efficiency isabout99%.Photovoltaic(PV)based proposedalgorithmisa technique for producing electrical power in AC mode by changing solar radiation into coordinate current power utilizing semiconductors that display the photovoltaic impact.

IndexTerms-
SwitchedCapacitor(SC),PhotovoltaicInverter(PI),TotalHarmonicDistortion(THD).

COII2024AS125

Synthesis and Characterization of grafted gum karaya via microwave route for mercury (II) ions removal from aqueous solution

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Abstract: A novel pH-sensitive adsorbent for the elimination of Hg+2 ions from aqueous solution was synthesized by grafting of itaconic acid onto gum karaya (GK) using microwave-assisted method without the help of any initiator. The synthesized adsorbent [GK-g-poly(Ita)] was characterized via various analytical techniques such as SEM, FT-IR, and XRD to confirm its grafting. To achieve the removal of the highest Hg+2 from water, various influencing parameters, such as adsorption dosage, pH value, time duration, and concentration, were investigated. The highest elimination of Hg+2 (92%) was achieved at dosage 30 mg, pH 6, time 50 minutes, temperature 30 0C and 100 ppm of Hg+2 concentration. The Hg+2 adsorption on [GK-g-poly(Ita)] was verified by FT-IR, XRD, and SEM studies. To understand the adsorption pattern, the adsorption isotherm was explained by the Langmuir and Freundlich adsorption isotherms, and the adsorption kinetics was investigated using different kinetic models. The present work provides convincing data that proves beyond doubt that material based on gum karaya and itaconic acid [GK-g-poly(Ita)] appears to be capable of effectively removing Hg+2 from aqueous system, and that can be potentially extended.

Keywords: - Gum Karaya, Grafting, Hg+2, Adsorption, Microwave.

COII2024CE126

Sustainable Soil Improvement: A Comprehensive Study on Bagasse Ash and Plastic Waste Integration

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Abstract: The construction of structures on clayey soil presents inherent challenges due to its water-absorbing characteristics and unpredictable settlement behaviour. In response, various stabilization techniques have been explored to enhance soil properties. Recent attention has shifted towards sustainable practices, with a focus on utilizing bagasse ash and plastic waste. These materials offer a promising avenue for improving geotechnical properties while addressing the environmental burden associated with landfill disposal. This study investigates the influence of incorporating bagasse ash and plastic strips in varying ratios into clayey soil. Bagasse ash (BA) is introduced at different concentrations (5%, 10%, 15%, and 20% by weight of soil), complemented by the inclusion of Plastic Waste Strips (PWS) at diverse proportions (0.3%, 0.6%, 0.9%, and 1.2%) within the soil-bagasse ash matrix. The research assesses key engineering properties, including the Unconfined Compressive Strength (UCS), and California Bearing Ratio (CBR) under both Unsoaked and Soaked conditions. The findings reveal a notable enhancement in soil strength with the integration of bagasse ash and plastic waste strips. Through rigorous analysis, the optimal blending ratio is determined as 15% Bagasse ash and 0.9% PWS in the soil matrix. Positive correlations emerge between Unsoaked and Soaked CBR and UCS values, underscoring the cohesive impact of the

introduced materials. This research contributes to the growing body of knowledge on sustainable soil improvement, highlighting the economic and environmental advantages of incorporating bagasse ash and plastic waste for enhanced engineering properties in clayey soil.

Keywords: Soil Stabilization, Bagasse ash, Plastic waste strips, Unconfined Compressive Strength, California Bearing Ratio.

COII2024CE128

Remote Sensing for Sustainable Development for Indian Cities by Land Use Pattern

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Abstract- The United Nations has given 17 Sustainable Development Goals (SDGs) focusing on economic, social and environmental objectives. Goal 11- Sustainable Cities and Communities is important to utilize land resources properly for the development of cities. This is done to satisfy the requirements of the present and upcoming generations. The purpose of this study is to analyse the change in land use patterns of Bhopal in urban areas, water bodies, agricultural land, open areas and forest land, with time duration 2000, 2010 and 2020. Satellite images were obtained from USGS Earth Explorer change detection and were analysed. To determine change Unsupervised classification was done for Bhopal City. By using Cellular Automata model and past land use pattern a future prediction for year 2030 and 2040 is also done. Based on changes in land use patterns in percentage, one can predict whether a city is trending toward sustainability by analysing parameters such as increased green spaces, mixed-use development, and the preservation of natural areas. Results show that Forest cover decreases for the examined cities. By examining the rate of urbanization and the decrease in water bodies and forest cover there is a need for important steps to conserve resources and look toward sustainability.

Keywords- Sustainable development, Land use pattern, Satellite images, Unsupervised Classification

COII2024IT135

Routing Protocol for WSN by using Sensor Nodes

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Abstract-The deployment of nodes plays a crucial role in enhancing the longevity of wireless sensor networks (WSN) within routing protocols. While it poses a challenging task, it is motivated by two primary factors. The first factor involves the distance from the base station, while the second is associated with reducing the overall number of nodes. Efficient battery utilization is imperative for maximizing the energy of the nodes.Achieving this efficiency involves initially defining criteria for the distance variation among nodes within the WSN. Consequently, reducing the finer granularity of node numbers becomes essential to enhance the cluster head selection process in the routing protocol, consequently prolonging the lifetime and improving the throughput of the WSN. The involvement of sensor nodes further contributes to enhancing energy efficiency and extending the overall lifetime of the WSN.

Keywords- WSN, Nodes, Routing Protocols, Simulation, Base Station, Deployment

COII2024CSE136

An Approach to Detecting Turning Targets Using Probabilistic Data Association Filtering based Tracking

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Abstract- Flexibility to select the FUSIM sensor platform, users can easily modify the MATLAB code within the relevant files to change the parameters and generate the desired output. For example, the modeling of ESM and IR sensors in the FUSIM program was oversimplified to allow direct application of measurement and tracking functions.

Keywords- Data Fusion, Tracking Algorithms, PDAF, Simulation, SFUSIM, Maneuvering

COII2024CSE138

Enhancing Biometric Security: Multimodal Fusion and Continuous Authentication

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Abstract - Biometric security systems play a crucial role in safeguarding sensitive information and access control. This research aims to enhance the robustness and reliability of biometric authentication by exploring the integration of multimodal biometrics and the implementation of continuous authentication mechanisms. The study will investigate the synergistic effects of combining multiple biometric modalities, such as fingerprint, facial recognition, and voice authentication, to create a more resilient and accurate authentication system. Additionally, the research will delve into the development of continuous authentication techniques that adapt to users' behavioural patterns over time, providing a dynamic and proactive security framework. The proposed approach aims to address the limitations of traditional static biometric systems, such as susceptibility to spoofing and changes in users' physiological characteristics. The outcomes of this research will contribute to advancing the state-of-the-art in biometric security and ensuring a higher level of protection in critical applications, including access control, financial transactions, and sensitive data management.

Keywords - Biometric security, Multimodal biometrics, Authentication, Fingerprint recognition, Facial recognition, Voice authentication, Security enhancement, Spoofing detection, Sensitive data protection, User authentication .

COII2024ME139

Eco-Friendly Manufacturing: Navigating the Future with Green Practices

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Abstract—The industrial sector has long been associated with environmental degradation due to its resource-intensive processes and emissions. In recent years, there has been a growing awareness of the need for eco-friendly manufacturing practices to mitigate the impact of industrial activities on the environment. This research paper explores the concept of eco-friendly manufacturing and examines the various green practices that can be adopted by industries to promote sustainability. The paper also investigates the challenges and opportunities associated with implementing eco-friendly manufacturing and analyse the role of technology in facilitating the transition towards a more environmentally conscious industrial landscape.

Keywords— eco-friendly, industrial activities, green practices, industrial landscape

COII2024EE140

IMPROVE THE POWER QUALITY IN ELECTRICAL SYSTEM USING FACT'S DEVICE

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ABSTRACT: Power quality is the measure of how well an electric power source is suited to power consumer devices. For example, an electrical system can operate without experiencing a
noticeable decrease in performance when the voltage, frequency, and phase are synchronized. Different types of outages and interruptions are affecting the distribution networks and sensitive industrial loads in the distribution system. Power quality is being impacted by several elements such as voltage variation, sag, brownout, ripples, harmonic noise, flicker, spikes in voltage, and interruptions. When compared to regular operating procedures, this results in certain power variances. Using compensation devices (custom power devices), the aforementioned issues can be resolved by either improving the quality or compensating the load, i.e., correcting its power factor, imbalance, etc. by using Matlab.

Key points : Power Quality, Voltage Sag, Voltage Swell, Harmonics, Flicker, Voltage Fluctuation, MATLAB

COII2024CSE144

Bullying in "The Cyber World"

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Abstract: A research unto the subject in question indicates that cyberbullying is turning into a lot of prevalent, as most people, if not all, consume maximum amount of time on technology that keeps them connected to their peer groups 24 hours a day. The world, including India, is progressive towards digital world which means e-transactions, conversations, etc. but such progress comes with various threats and cyberbullying is one such threat. There are various ways in which cyberbullies can attack their victims, including social networking sites, cell phone calls, text messaging and video calling through internet, there are different varieties of cyberbullying together with, however not restricted to cyberstalking, impersonation and harassment. Like bullying, cyberbullying may be a major problem which may cause the victim to feel inadequate and excessively self-conscious, beside the chance of committing suicide because of cyberbullying. There are four cases involved in this paper. There are distinctive ways in which the prevention of cyberbullying can be performed by some digital methods.

Keywords- Cyberbullying, Impersonation, Cyberstalking, Bullycide.

COII2024CSE145

5G Wireless Technology in the Future

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Abstract — 5G Technology stands for 5th generation mobile network. It is a new worldwide wireless standard after 1G,2G,3G, and 4G networks.5G wireless technology is meant to deliver higher multi-Gbps peak data speeds, ultra-low delay, more reliability, huge network ability to hold or do something, increased availability, and a more uniform user experience to more users.5G services are also expected to play a big part (in accomplishing or gaining with effort) the money- based(economic impact) goal of making India a $7-trillion (process of people making, selling, and buying things) by the year 2030. According to experts, this 5G will have a money- based effect of $1 trillion by 2035 and may deliver an added GDP of $150 billion for the country between 2025-40.

Keywords — 5G, economic impact, low delay.

COII2024AS146

EFFECT OF VARIABLE SUCTION ON OSCILLATORY FLOW

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Abstract -An analysis of a two-dimensional flow of water past an infinite vertical porous plate is presented unde the following conditions: the suction velocity oscillates in time about a constant non- zero mean, the free stream velocity oscillates in time about a constant mean, the plate temperature is constant, and the difference between the temperature of th plate and the free stream is moderately large causing free convection currents Approximate solutions for the coupled non-linea equations are obtained for the transient velocity, th transient temperature, the amplitude and the phase o the skin-friction and the rate of heat transfer. Durin the course of discussion, the effects of +G (The Grashof number, G>0 cooling of the plate b the free convection current G < 0 heating of the plat by the free convection currents), A (variable suctio parameter) and () (frequency) have been discussed.

COII2024CE147

A review of Relativistic Geodesy as a way forward to establishment of Indian Atomic Clock Network

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Abstract -Geodesy is the field which deals with precise determination of the shape and size of the Earth an its gravity field along with the orientation in space. Orientation of the Earth in space can also be determined using geodetic techniques such as Ver Long Baseline Interferometry(VLBI), Doppler Orbitography and Radiopositioning Integrated by Satellite(DORIS), Satellite Laser Ranging(SLR) and GNSS. Gravity field of the Earth is a dynamic quantity and can be determined by measuring th acceleration due to gravity. The value of acceleratio due to gravity is measured using both ground base and satellite based instruments. Gravimeters are th instruments which are used to precisely determine th value of acceleration due to gravity Determination of the gravity field of the Earth is o great importance. If we can measure the gravity fiel of the Earth precisely it can give us information abou several processes occurring on and below the surface of Earth.

COII2024AS148

Study of Nanotechnology and future of nanotechnology with its uses

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Abstract: Nanotechnology is an exciting new area in science, with many possible applications in medicine. This article seeks to outline the role of different areas such as diagnosis of diseases, drug delivery, imaging, and so on. In this Opinion, the underlying scientific concepts of nanotechnology have been considered more important than the semantics of a definition, so these are considered first. The Committee considers that the scope of Nanoscience and nanotechnology used by the UK Royal Society and Royal Academy of Engineering in their 2004 report (Royal Society and Royal Academy of Engineering 2004) adequately expresses these concepts.

Key words: Nanotechnology, Medicine, Nanoscience etc.

COII2024CSE149

Evaluation metrices in stock market price prediction

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Abstract: The stock market price prediction has been a very challenging task in the recent times. The different models, algorithms and associated data sets based on Machine learning, deep learning and sentiment analysis have provided millions of the results to prove their accuracy but the efficiency is still the prime concern among the researchers. Any model and their results can only be verified and trusted if they are subjected to certain performance parameters that check their validity and accuracy of the results they provide. In this paper we are going to discuss some of the most popular evaluation metrices that have been extensively used in the stock market price predication methods. Also, we have tried to highlight the most frequently used techniques, their challenges and their benefits according to the accuracy based on the results provided.

Keywords: Metrices, performance parameters, Evaluation metrices, results analysis

COII2024CE151

Utilization of waste plastics for manufacturing of plastic bricks

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ABSTRACT: Plastic is a non bio-degradable substance which takes thousands of years to decompose that creates land as well as water pollution also to the environment. The quantity of plastic waste is expanding very rapidly. It is estimated that the rate of usage is double for every 10 years. The plastic usage is large in consumption and one of the largest plastic wastes is polyethylene (PE). The utilization of earth based clay material resulted in resource depletion and environmental degradation. One such effort is the efficient use of waste plastic and laterite quarry waste with a small quantity of bitumen, to develop an alternative building material such as bricks with negligible water absorption and satisfactory strength in comparison with laterite stone to satisfy the increasing demand of conventional building materials. Utilizing waste plastic as construction materials especially in the manufacturing of bricks is one of the promising steps towards a sustainable resources and waste management. Plastic waste can substitute either partially or completely one or more of the materials in the brick production. Further research based on recent research and a better understanding in utilization plastic waste in brick is needed to produce a high durability and quality of bricks as well as to achieve the optimum balance in all aspects especially in terms of cost and functionally.

Keywords: plastic waste, bricks, Compressive strength, Water Absorption

COII2024CSE154

Convolutional Neural Networks: An Overview of Architectures, Techniques, and Uses in Object Recognition.

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Abstract - This paper takes a close look at how we can use Convolutional Neural Networks (CNNs) to solve the problem of classifying images, which means putting images into predefined categories. CNNs are like super-smart tools for this job because they're really good at spotting complex patterns in pictures. In this paper, we cover a bunch of stuff about using CNNs for image classification. We talk about the different kinds of CNNs, how to train them, and how to measure how well they're doing. We dig deep into the research and test things out to give you a good idea of the best methods and tricks people use when working with CNNs for image classification. We also talk about what might come next in this field, showing that it's always changing and getting better. So, if you're a researcher, someone who uses these methods, or just really interested in this topic, this paper is a great resource to help you understand, use, and push forwardthe use of CNNs for image classification.

Keywords - Image classification, CNN, computer vision, deep learning, neuralnetwork architectures, object recognition

COII2024ME157

A Review of Advances in Design and Technologies for Solar Panel Cleaning Systems

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Abstract — This comprehensive review paper aims to thoroughly analyze the latest developments, solutions, and future opportunities in the area of solar panel cleaning robots over the last decade. The key focus will be examining emerging technologies, from early methods utilizing essential components to more innovative solutions integrating advanced mechatronics and sensors. The paper will also evaluate different panel cleaning techniques studied through experiments and their suitability under changing environmental conditions. The review seeks to identify current trends and applications of these automated cleaning systems while highlighting promising research directions that can optimize their operations and maximize returns on investments for solar farm owners.

Keywords— solar farm, solar panel cleaning, dust accumulation, cleaning techniques.

COII2024CSE158

WhatsBook: Reliable Messaging App

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Abstract: The communication, interchange and exchange of messages in the Internet is referred to as chat. It is composed of two or more persons who are communicating by means of a chat enabled service or software. Talk may be conducted over the Internet using text, audio or video. There are two basic components of a chat application, through the server and client. A server is a machine program or device that's capable of providing functionality to different programs and devices. Clients that would like to communicate with one another are connected to the server. Instead of a peer-to-peer chat, the chat application that we'll make will be more like a talk room. So, you can connect to a chat server and send messages from more than one user. Every message is transmitted to all the chat users that are signed in. This chat application has been designed in such a way that it will not only provide chat functionality but will also support clean user interfaces and solid app structures on the secure broadcast network. In a communication medium, this is an effort to go further in terms of Internet security. The exit of the existing chat applications has greatly influenced the UI User Interface design to provide users with a familiar yet fresh user experience. The application's implementation was based on a new but efficient set of node JS, React, Chat Engine API, CSS and JavaScript, where react was for the app structure, node for server setup, and Chat Engine API for all the functions and UI User Interface. Data transfer from the client to the server as well as back to the client was conducted using an end-to-end connection stream. It concluded that the application was working well without any delays.

Keywords: Client, Server, Chat, Databases, React, API, UI.

COII2024CSE161

Imposing on Defy Protocol in Supply chains managements: A Comprehensive Study

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Abstract- This research paper explores the potential of utilizing Defy Protocol, a decentralized finance (DeFi) protocol, in supply chains managements to enhance transparency, efficiency, and security. The paper delves into the principles of blockchain technology, smart contracts, and their applications in supply chain operations. It also investigates the challenges and opportunities associated with integrating Defy Protocol into the traditional supply chain ecosystem. The study employs a mixed-method approach involving qualitative and quantitative data analysis, case studies, and interviews with industry experts to provide insights into the feasibility and benefits of adopting Defy Protocol in

supply chains managements. Yet, traditional supply chain models often fall short in addressing the modern-day imperatives of transparency, efficiency, and security. This research seeks to offer an all-encompassing analysis of the transformative possibilities that the adoption of Defy Protocol can bring to supply chains managements

Keywords: Defy protocol, SCM, Data Analysis, Data Integration, Training & Validation Loss

COII2024ME162

Review of High Temperature Composite material for Space Application

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Abstract: Compositesare the materials made from two or more constituent materials with significantly different physical or chemical properties that, when combined produce a material with characteristics different from the individual components. The individual components remain separates and distinct within the finished structure differentiating composites from mixtures and solid solution. They have desirable mechanical and physical properties that are now being utilized in automotive industry and aerospace on a grand scale worldwide. Variousresearches is being going to improve and repair, recyclability and the bonding between fibres and matrix material. They generally have higher strength fibres with unusually high stiffness, or modulus of elasticity characteristics, compare to other materials, while bound together by weaker matrices. The high strength fibres are also low density while occupying a large fraction of the volume. The composites exhibit desirable physical and chemical properties that include light weight coupled with high stiffness and strength along the direction of the reinforcing fibres, dimensional stability, temperature and chemical resistance performance and relatively easy processing. The selection of reinforcement material is based on the properties desired in the finished products. These materials do not react with the resin but are a distinct and integral part of the composite system. Engineered composite materials must be formed to shape. The matrix material can be introduced to the reinforcement before or other the reinforcement material is placed in to the mould cavity or onto the mould surface.The matrix material experiences a melding event, after which the part shape is essentially set. Depending upon the nature of the matrix material, this molding event can occur in various ways such as chemical polymerization for a thermoset polymer matrix, as solidification from the melted state for a thermoplastics polymers matrix composite.

Key Word: Composite material, Aerospace.

COII2024CSE167

Automated Attendance System Using Facial Recognition: A Comprehensive Review

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Abstract—In contemporary settings, attendance tracking serves as a fundamental aspect across various domains, including educational institutions and corporate environments. Traditionally reliant on manual methods, the cumbersome nature of these processes has prompted a paradigm shift towards more innovative and automated solutions. The emergence of Facial Recognition Technology (FRT) has garnered significant attention as a potential game-changer in this landscape. This review paper delves into the historical evolution and intricate technological facets of automated attendance systems utilizing facial recognition. From a chronological perspective, we explore the trajectory of these systems, outlining their transformative journey from nascent experiments to sophisticated, real-world applications. Key considerations include the underlying algorithms, sensor technologies, and their collective role in shaping the current state of FRT-based attendance tracking. As we navigate the literature, a comprehensive comparative analysis uncovers the strengths and weaknesses of existing facial recognition-based attendance systems. By critically evaluating their performance against traditional methods, we discern the nuanced intricacies that underscore the efficacy of these systems in diverse contexts. Moreover, a meticulous examination of challenges, ranging from privacy concerns to environmental factors, offers insights into the limitations currently inhibiting the widespread adoption of FRT. The review culminates in a forward-looking exploration of the future scope, pinpointing potential breakthroughs and areas for optimization. This paper aims to contribute valuable perspectives to researchers, practitioners, and policymakers alike, providing a holistic understanding of the present landscape and envisioning the trajectory of facial recognition technology in revolutionizing attendance tracking.

Keywords—Facial Recognition Technology, Automated Attendance Systems, Comparative Analysis, Privacy Concerns, etc.

COII2024CSE168

Guardians of the Digital Realm: A Journey Though Cyber Threats & Defenses

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Abstract — As our world becomes increasingly interconnected, the omnipresence of digital technologies has brought unprecedented opportunities and challenges. "Guardians of the Digital Realm: A Journey through Cyber Threats and Defenses" embarks on a comprehensive exploration of the evolving landscape of cyber-attacks and the countermeasures employed to safeguard our digital ecosystems. This paper surveys a myriad of cyber threats, ranging from sophisticated malware to social engineering exploits, and investigates the strategies devised by cyber guardians to thwart these evolving dangers The journey navigates through key concepts such as encryption, intrusion detection, and incident response, shedding light on the

dynamic interplay between attackers and defenders in the cyber domain. With a focus on simplicity and clarity, this survey aims to provide a digestible yet insightful overview, empowering both experts and enthusiasts alike to comprehend the ongoing saga of cyber security in our ever-evolvin digital era. Join us as w unravel the intricate threads of cyber resilience and the relentless efforts undertaken by the guardians standing sentinel in the vast and interconnected digital realm.

Keywords — Spoofing; CloudSEK; MICE; DNS; DDoS.

COII2024ECE169

SMART CITY AUTOMATION USING ARDUINO

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Abstract-- The scope of this paper is to implement some ideas for smart city based on ARDUINO UNO technology. Most of the world's population lives in the cities. By 2030, the population of the cities around the world is expected to grow from 8 billion to 10 billion. Due to increasing population, the utilization of vehicles is increasing in large numbers. There are numerous vehicles that keeps running on the streets in the same time, as a result of this the traffic issues are being confronted. To improve this, it is necessary to develop the smart cities. The main point that defines smart city includes Traffic signals, Car parking, Street Lights, Railway Crossing, Water Management.

Keywords—Arduino, Sensors, LED's

COII2024AS172

GREAT GURU PARAMPARA OF BHARAT

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Abstract: The Guru Parampara discusses the pedigree of Gurus who have made it possible for knowledge to be passed down through the generations for the benediction of humanity. It is the transfer of knowledge from the Guru to the disciple. No age has been immune to mental pain, but the Guru-Shishya institution has made sure that every generation has access to the knowledge that can end it. The lineage of the Gurus of the revered Advaita philosophy is known as the Advaita Guru Parampara. This lineage of Gurus includes well-known figures

like AdiShankeracharya, Ved Vyasa, and Maharishi Vashishtha. Their contributions have ensured that Advaita knowledge endures across time. Scriptures such as the Upanishads and the Bhagavad Gita, along with other forms of knowledge that lead to spiritual experiences, have been passed down through the lineage. This article refers to enlighten the importance and value of Guru Parampara with the help of great Indian scriptures

Keywords: Guru-Shishya, Guru Parampara, Advaita philosophy, Advaita.

COII2024CE174

Comparative Study between Precast and Cast In-Situ Structure Under Combination of Dynamic Loads and Connections between Precast Elements

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Abstract- Precast building system offers a wide range of benefits and advantages to the designer to meet all the client`s requirements. The rapid growth in usage of precast systems demands the improvement of its structural behavior when it is subjected to dynamic loads. This Project deals
with the analysis and design of Precast Substation building with Crane (5tons capacity) subjected to Dynamic loads due to Earthquake. In order to justify its structural behavior, the cast in-situ structure is also analyzed and compared with precast structure. Hence in this project, the substation building of 78m (length) x 22m (breadth) x 9.6m (height) is designed by considering various loads such as Dead load, Live load, Soil load, Wind load, Seismic load and Crane load as per IS 875: 1987 (Part – I, II, III & V), IS 1893: 2002, IS 456: 2000 and the other guidelines for the crane loads. Seismic loads are calculated using seismic coefficient method and base shear values were obtained. Further the substation building is modeled and analyzed using STAAD.ProV8i software. Both Static and Dynamic analysis (Response Spectrum Analysis) i performed in it. Then from the obtained STAAD.ProV8i results, the various structural elements were designed and quantity estimated. Finally, by using above results, the behavior and quantity comparison between precast and cast in-situ structures were done and conclusion is given.

Keywords: Precast structures, substation building with crane loads, seismic resistant structure, dynamic analysis in STAAD.Pro V8i,comparative study between precast and cast in-
situ structures, connection for precast.

COII2024CSE175

Navigating NFT Markets: Uncovering Trends and Strategic Insights

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Abstract— High-profile sales and widespread media coverage have fueled interest Non-Fungible Tokens (NFTs). NFTs offer a distinctive investing opportunity in NFTs related aspects. The objective of this work is to examine market trends and the investing possibilities of NFTs. The review looks at the market's current condition along with benefits, and drawbacks of investing in NFTs. Various investment techniques, and the prospects for NFTs are considered as a investment vehicle in the future. Its main features are high security and fast changeover and controlled using Distributed Ledger Technology (DLT) or a block-chain architecture. The development and implementation of specific functions in smart contracts has taken the tokenization process to the next level. Tokens have become a safe and secure option for users worldwide to deposit, withdraw, trade and store assets, especially platform-specific tokens that encourage the use of the application for proprietary security tokens that represent assets.

Keywords— Non- Fungible Token, Block Chain, De-Fi, Marketplace.

COII2024EE176

Enhancing Power Quality and Dynamic Performance with Artificial Neural Network (ANN) Supervision of DSTATCOM

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Abstract— In distribution power systems, low power quality and dynamic performance are caused by insufficient reactive power assistance during disruptions. It is advantageous to introduce a Distribution Static Compensator (DSTATCOM) in order to improve dynamic performance and power quality. Distribution power systems often use proportional and integral (PI) controllers to govern DSTATCOM operation. But PI-controlled DSTATCOM might not work as well under all operational scenarios because power systems are nonlinear and vulnerable to diverse kinds of disruptions. More reliable controllers—like those built on fuzzy logic techniques—become necessary to solve this problem in order to guarantee efficient dynamic voltage regulation and enhance the quality and stability of the electricity in distribution power systems. This thesis describes how a fuzzy logic-based controller for a 3MVA DSTATCOM was developed with the goal of improving distribution power system stability and power quality. The Grey Wolf Optimisation (GWO) algorithm is used to adjust the fuzzy logic controllers' scaling factors. The study uses the Sim Power System to simulate PI-controlled, fuzzy logic-based, and Artificial Neural Network (ANN)- controlled DSTATCOMs in the MATLAB/Simulink environment. These DSTATCOM controllers' performance is evaluated under load variation and grid-side voltage sag scenarios. The ANN-controlled DSTATCOM has better system dynamic response, as shown by simulation results in MATLAB/Sim Power Systems. This enhances power quality and stability in distribution power systems.

Keywords: Distribution power system, ANN control in DSTATCOM, Grey Wolf Optimization (GWO) algorithm, MATLAB/Sim Power SystemsINTRODUCTION

COII2024CE181

Artificial Method to Recharge Groundwater by Utilizing Waste Water from Residential Zone.

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Abstract: The Artificial recharge of groundwater exploitation continues to rise, significantly in arid and semi-arid countries. Artificial recharge as a way to strengthen the natural provide of groundwater aquifers is popping into more and more necessary in groundwater management. the first aim of this study is to arising with and planning of artificial recharge structures for residential district . The study estimated the degree of generated waste water yet as rain runoff water and from the residential district . the speed of natural ground water recharge, rain runoff and total treated effluent out there for recharge is calculable as further or various method of recharge of spring water . From the world bank report it is found that a confined aquifer is goes decreasingly up to 4m to 8m from there natural level. The soil strata below the aquifer were impervious. So recharging below impervious layer is impossible in order that we've to recharge treated water in pervious layer. that's within aquifer in order that treating this water within rapid sand filter and sends it to the aquifer. the first objective of this technology is enhance groundwater resources in arid and semi arid area in country.

Index Terms – Ground Water Recharge,Rapid Sand Filter.

COII2024CE182

Machine Learning process for extraction of land use pattern

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Abstract- This research investigates the nexus of sustainable urban development, land use pattern extraction, and machine learning within the framework of the United Nations' 17 Sustainable Development Goals. Focusing on Goal 11, dedicated to creating sustainable cities amid rapid urbanization, the study underscores the significance of land mapping, incorporating classifications of land use and land cover. Leveraging remote sensing technologies and innovative models, such as System Dynamics and Cellular Automata, enables the prediction of future land use patterns. Machine learning techniques, including deep learning, transfer learning, and ensemble learning, emerge as versatile tools for extracting, categorizing, and analysing land use patterns. The paper explores diverse applications of machine learning in sustainable urban planning, addressing challenges related to data quality, labelling, and ethical considerations. Future directions encompass explainable AI, advancements in deep learning architectures, multi-modal data integration, and global

collaboration, offering a comprehensive roadmap for the evolution of machine learning applications in land use pattern extraction, supporting sustainable urban development and informed decision-making.

Keywords- Sustainable development, Urban planning, Land use patterns, Machine learning, Deep learning.

COII2024AS184

Nanotechnology: A Review with Emerging Technologies

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Abstract: Nanotechnology is new frontiers of this century. The world is facing great challenges in meeting rising demands for basic commodities, finished goods (e.g., cellphones, cars and airplanes) and services (e.g., shelter,healthcare and employment) while reducing and minimizing the impact of human activities on Earth's global environment and climate. Nanotechnology has emerged as a versatile platform that could provide efficient, cost-effective and environmentally acceptable solutions to the global sustainability challenges facing society. In recent years there has been a rapid increase in nanotechnology in the fields of medicine and more specifically in targeted drug delivery.opportunities of utilizing nanotechnology to address global challenges in water purification, clean energy technologies, greenhouse gases management,) materials supply and utilization, and green manufacturing and chemistry. Smart delivery of nutrients,bio-separation of proteins, rapid sampling of biological and chemical contaminants, and nanoencapsulation of nutraceuticals are some of the emerging topics of nanotechnology for food and agriculture. This review paper look into the present aspects of "Nanotechnology". It gives a brief description about Nanotechnology and its application in various fields viz. medicine, computing, Robotics, food technology and Solar cells etc. It also deals with the future perspectives of Nanotechnology.

Keywords: Nanoelectronics, Nanotubes, Nanomedicine, Nanofilms.

COII2024CS186

Streaming Images in Real-Time: Agile Acquisition and Advanced Compression

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Abstract: The three main stages of wireless multimedia sensor networks (WMSN) are image sensing,data processing, and transmission. The goal is real-time image acquisition using a camera, but challenges arise due to large image sizes (50KB and above), with strain memory, power, and bandwidth. To address this, the research explores compression algorithms to extend sensor life, decrease data size, and cut power use. The research tests six to seven compression techniques on original images, comparing aspects like compressed image quality, compression ratio and signal to noise ratio (SNR). This research underscores the efficacy of a specific technique for real-time image compression within wireless multimedia sensor networks. This technique demonstrates significant enhancements concerning compressed image size, compression ratio, bit rate, Peak signal to noise ratio (PSNR), and, notably mean square error (MSE) almost approaching zero, thereby substantiating its efficiency during real-time processing.

Keywords: Image Compression, Peak signal to noise ratio, Wireless multimedia sensor network, High Efficiency Video Coding, Discrete Cosine Transform

COII2024EE187

SYNTHESIS and INVESTIGATION of ELECTRICAL PROPERTIES of Co-Mg DOPED M-type STRONTIUM FERRITES

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Abstract - M-type hexaferrites SrCoyMgyFe12-2yO19 were synthesized by the sol-gel technique. The electric properties of these ferrites have been explored in a frequency range of 100 Hz to 2 MHz. The inclusion of Co2+ and Mg2+ enhances the conductance and capacitance of the synthesized ferrites. The capacitance of these ferrite can be tuned by doping of Co-Mg and can be utilized in various applications such as storage media and magnetic recording.

Keywords - Hexaferrites, Sol-gel, Conductance, Admittance

COII2024CSE188

Design of Framework of Automatic Evaluation of Descriptive Questions using Text Summarization

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Abstract: As the the use of internet is increasing day-by-day, most of the services/ faciliteis are going to online. education system is also gone online through e-learning. but evaluation of answer scripts are still performed in manually. in manual evaluation sytem, the evaluator has to do tedious work of evaluation when a a question does not have a definite answer and have multiple correct answers. these answers contains different sentences, but their key points are about same. in this paper a frame work of a evaluation model(AEDQ) is designed to perform automatic evaluation of descriptive questions. the model is based on text summarization and its supportive techniques such as text mining, information retrieval, information extraction and NLP. the paper briefly discussed the importance of automation of evaluation work and demerits of present evaluation. it also make a discussion about the tecjnology used in model and make a detail discussion on the methodology of proposed model.

Keywords: Text summarization, text mining, evaluation of descriptive questions,

COII2024CSE189

A comprehensive review of Innovations Improving Legal Procedures and Rehabilitation for Undertrial Prisoners in India

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Abstract - This comprehensive review examines the myriad innovations that have been introduced to enhance legal procedures and rehabilitation efforts for undertrial prisoners in India. The undertrial population faces unique challenges within the criminal justice system, including prolonged detention periods and inadequate access to rehabilitation services. The study explores a range of initiatives, spanning legal reforms, technological advancements, and social interventions, aimed at addressing these issues. This research paper examines the rights and status of prisoners who are awaiting trial from the standpoint of the Indian Constitution and relevant national and international human rights laws. By exposing the vulnerable state in which detained undertrial inmates find themselves, it is contended that further measures are desperately needed to protect their constitutionally guaranteed right to life and liberty. It assesses the impact of these innovations on the efficiency of legal proceedings, the rights of undertrial prisoners, and their successful reintegration into society post-release. By synthesizing current knowledge and highlighting gaps in existing research, this review contributes to the ongoing discourse on criminal justice reform and human rights in India. The main purpose of criminal law is to protect the human rights of every victim, prisoner, and prisoner facing trial. The days of a convicted criminal being sent to spend his days in a dark prison are over.

Keywords - Undertrial prisoners, legal procedures, rehabilitation, criminal justice system, technological advancements, social interventions, human rights, reintegration, detention periods, legal proceedings, prison reform.

COII2024AS190

A Novel Inhibitory Kinetic Spectrophotometric Method for the Determination of Famotidine

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Abstract: A kinetic spectrophotometric method for the determination of famotidine, based on its inhibitory effect on Hg(II) catalyzed substitution of cyanide ion, by 4-cyanopyridine in hexacyanoferrate(II) is described. Famotidine ions form strong complexes with Hg(II) catalyst which is used as the basis for its determination at trace level. The progress of reaction was monitored, spectrophotometrically, at 477nm (λmax of [Fe(CN)5CNpy]3−, complex) under the optimum reaction conditions at: [Fe(CN)64-] = 5 × 10-3 M, [4-CNpy] = 2.5 × 10-4 M, [Hg2+] = 2 × 10-5 M, pH = 2.8 ± 0.02, I = 0.02 M (KNO3) and temperature = 25±0.1°C. A linear relationship obtained between absorbance (measured at 477nm at different times) and inhibitor concentration, under specified conditions, has been used for the determination of [famotidine] in the range of 0.2 – 2.0 × 10−5M with a detection limit of 5.2 × 10−7 M. The standard deviation and percentage relative standard deviation have been calculated and reported with each datum. A most plausible mechanistic scheme has been proposed for the reaction. The values of equilibrium constants for complex formation between catalyst–inhibitor (KCI), catalyst–substrate (Ks) and Michaelis–Menten constant (Km) have been computed from the kinetic data. The influence of possible interference by major cations and anions on the determination of famotidine and their limits has been investigated.

COII-2024 MANUSCRIPTS ABSTRACT(MGMT)

COII2024MBA001

Significance of Professional Communication in changing practices of Human Resource Management

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Abstract- In any organization, the prime objective of Human Resource Management is to find and cultivate professional capabilities among the employees. This is achieved through good communication skills which in turn is developed through the use of Professional Communication. Professional Communication helps in right decision making, skilful planning, resource optimisation, providing motivation and conflict management. Through the use of modern technological advancements like Metaverse and various social media platforms and apps, Professional Communication has revolutionized the field of Human Resource Management. In addition to making organizations more technological friendly, it has enabled a more emotionally stable working environment in them. Good communication skill is the backbone of any Human Resource activity. Be it selection of candidates, their training, work allocation among them or team management, Professional Communication provides significantly useful tools to the Human Resource field through its various communication skill sets. Today's Human Resource Management demands dynamism, speedy conflict resolutions and global connectivity for any organization to flourish. Professional Communication has made this possible for HR managers. An HR professional, with his expertise in communication skills and by the use of modern technological advancements, can cater to the needs of modern day organizations. And this is what Professional Communication aims to provide.

Keywords: Smooth functioning, good communication skills, professional communication, HR managers, productivity

COII2024MBA002

SOCIAL MEDIA IMPACT ON CONSUMER TRUST ON FMCG BRANDS IN NORTH INDIA

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Abstract: Purpose: The purpose of this article is to conduct an analytical investigation on the impact of social media and the specific social media platform on consumers' trust in FMCG brands. The extent to which social media alters experiences is examined in a quantitative survey. Outsiders in senior positions are now gradually surpassing insiders in understanding of customers and services, which might have an impact on results in unrelated roles. Because advertisers have no influence over the content, timing, or recurrence of online customer discussions, web chat draws customers. According to the findings, social media use has an impact on customer satisfaction during the information-seeking and other assessment phases. This effect gets stronger as customers proceed to make their final decision and conduct post-purchase analysis. The findings demonstrate that marketing initiatives have a favorable effect on people. Method. 70 participants with at least six months of social media exposure were chosen at random for this study, which will be carried out using google analytics. Google Forms will be used to distribute an online survey to collect data. To cover the distribution of the North Indian population, consumer data will be gathered using the Google Form, and questionnaires will be used for analysis. Findings This research will show the consumer's trust affected to what degree by the social media platform in FMCG brands. The study will be done in the part of North India to see the effect of the social platform using SEM to which extent the trust varies, of the consumer. We will take well known platforms like Instagram, Twitter, and YouTube.

Keywords: Social media, Factors, Loyalty, Trust, Brand.

COII2024MBA003

TRADE HORIZONS: NAVIGATING GLOBALIZATION IN THE ERA OF INDUSTRY 5.0

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ABSTRACT: The transition towards Industry 5.0 revolutionizes international trade and globalization by integrating advanced technologies like artificial intelligence, block-chain, 3D printing, and the Internet of Things into manufacturing and supply chain processes. This change fundamentally alters global trade dynamics and has significant economic implications. The study of international commerce has long been intertwined with political, social, and economic debates. As we approach the Industry 5.0 revolution, it is crucial to understand how these technologies are changing the nature of international commerce and the interconnectedness and dynamics of economic success across countries. Digital trade is a key aspect of Industry 5.0, focusing on specialized, personalized, high-quality products. It also includes digitally-enabled products, services, and indirect digital services. Digital trade has significant economic implications for domestic sectors, such as financial services, agriculture and food, infrastructure, and consumer and retail.

Keywords: Industry 5.0, International trade, Digital trade, Industry 4.0, Global trade.

COII2024MBA004

Unearthing Potential: Challenges and Opportunities in Promoting Innovation in Rural India

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Abstract-This paper explores the landscape of innovation in rural India, highlighting the often-overlooked potential of these regions. Drawing from extensive literature reviews, it identifies key challenges such as inadequate infrastructure, limited access to education, financial constraints, and resistance to change. However, it also uncovers opportunities, including the ability of rural innovations to address local needs, the potential for community engagement, and the role of government initiatives. The paper proposes a multifaceted approach to promoting rural innovation, encompassing strategies such as establishing innovation hubs, promoting digital literacy, tailored education programs, public-private partnerships, incentivizing sustainable agriculture, mobile-based agricultural extension services, entrepreneurship development, women's entrepreneurship, value addition to local products, and fostering healthcare innovations. By addressing these challenges and capitalizing on opportunities, this paper advocates for a comprehensive and integrated approach to drive sustainable development and inclusive growth in rural India.

Keywords: Innovation, Rural Communities, Digital India, Entrepreneurship, Digital Literacy.

COII2024MBA005

Deciphering Tomorrow: Unleashing the Role of AI in Business Decision Dynamics

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Abstract: - This Research Paper tells us the role of Artificial Intelligence in decision-making in all business organizations. As we all know the use of Artificial Intelligence is increasing day by day in our lives in every field, so it becomes important to use Artificial Intelligence also in the process of decision-making in a business environment. In this research paper, we will see how AI can help us in deciding for business in a better way. Also, there will be some challenges that come along the way while we use AI, we can overcome these challenges by using it properly and safely. And these shortcomings can be overcome by human judgment by morally using them. This paper tells us the efficient use of Artificial Intelligence as it uses previous databases and can make quick decisions compared to human decisions. AI can analyze larger data without error and can make faster, more accurate, and consistent data in making business decisions. This paper analyzes the benefits of using AI and the challenges that come along with using AI. In the upcoming days, to survive in the world of increasing technology, for profit making in business and to achieve desired goals we have to use AI.

Keywords: - Artificial Intelligence, Decision-making, Quick, Accurate, Business

COII2024MBA006

"AI-based Employee Retention Strategies: Analyzing Predictors and Interventions"

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Abstract:-As organizations grapple with the challenges of retaining top talent in an increasingly dynamic employment landscape, this research explores the application of artificial intelligence (AI) in the realm of employee retention. The study focuses on analyzing predictors of employee turnover and developing AI-driven interventions to enhance retention strategies. Leveraging machine learning algorithms and predictive analytics, the research aims to identify patterns and factors contributing to employee attrition. Additionally, the study investigates the efficacy of personalized interventions, such as targeted training, career development programs, and tailored incentives, generated through AI analysis. The outcomes of this research aim to provide organizations with data-driven insights to proactively address potential turnover risks and implement effective strategies to retain key personnel.

Keywords: Employee retention, artificial intelligence, predictive analytics, turnover predictors, machine learning, personalized interventions, talent management, career development, proactive retention,

COII2024MBA007

Influence of Green Finance on Growth of Indian Economy: An Empirical Study on Non-Conventional Energy Sources

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Abstract – The global pursuit of sustainable development has led to increased attention on the role of green finance in fostering environmental friendly economic growth. Green finance plays a crucial role in supporting and advancing non-conventional energy globally by providing funding and support for sustainable projects. It facilitates investments in renewable energy sources. This financial approach encourages the sustainable development of Indian economy and ecology. Additionally, green finance helps to mitigate climate adverse effect and promotes a low-carbon emission economy by aligning investments with (ESG) criteria. The Indian government and corporate houses play a crucial role in green finance projects. This empirical study explores the relationship between green finance and the growth of the Indian economy, with a specific focus on the non-conventional energy project.

Keywords – Green Finance, Non-Conventional Energy, Economic Growth, Sustainable Development, Low-Carbon Emission.

COII2024MBA008

FOMO Marketing: A Study on Ethical Issues in Context of Indian Philosophy

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Abstract - In India, like in many other countries, the intersection of marketing and ethics is a significant area of concern and scrutiny. Ethical marketing in India involves a commitment to transparency, consumer protection, cultural sensitivity, environmental sustainability, and adherence to regulatory standards. Companies that prioritize ethical considerations in their marketing strategies are likely to build trust, enhance their brand reputation, and foster long-term relationships with consumers in the Indian market. FOMO or Fear of Missing Out, marketing is a strategy that leverages the psychological phenomenon where individuals are driven to engage or purchase due to the fear that they will miss out on something valuable or exciting. While FOMO marketing can be effective in driving sales and engagement, it also raises ethical concerns. In the following article, author explores and touches the ethical issues involved in doing FOMO marketing in Indian philosophical context.

Keywords: Ethical concerns, FOMO marketing, 'Purusharth', 'Dharma', 'Yajna', 'Arth', Materialism, 'Kamsutra'.

COII2024MBA009

Innovation led by World Bank in India – An Empirical Study of Rural Productivity

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Abstract- The World Bank Group (WBG) over seven decades long partnership with India is strong and enduring. The world bank group partners with India to maximize technological gains, such as promoting post-harvest and processing technologies to modernize farm production and increase rural productivity with the help of sustainable transport,digital development, technical education, blended financing, renewable energy etc.In this research paper author represents an empirical study about how the world bank helps in development of rural India with its recent and upcoming projects in agriculture sector, energy efficiency sector, state highway project, sustainable development projects and directly affects the rural productivity in India.

Keywords – Smart technologies, rural productivity, sustainable development projects, Innovations, digital development, renewable technology.

COII2024MBA012

Harmony in Beauty: A Study on Green Cosmetics

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Abstract— The cosmetics industry continues to flourish unabated, driven by the increasing significance of self-care and wellness for consumers globally. The real cost of cosmetics encompasses various factors beyond the monetary price tags printed on the product. It involves considerations related to human health, environmental impact, ethical sourcing, and social responsibility and so on . The presence of chemicals in cosmetics is alarming, posing risks not just to human health but also to the environment, plants and animals etc. Therefore for consumers who wish to use makeup, exploring alternatives free from harmful substances is crucial. Instead of choosing traditional cosmetics filled with harmful strong chemicals, consumers can choose eco-friendly, organic, herbal, or sustainable alternatives. These options prioritize both personal well-being and environmental sustainability. Numerous cosmetic companies are introducing shampoos and cosmetics that are natural, organic, and eco-friendly. The market now features environmentally-conscious products, ranging from personal care cosmetics, skin care products, fragrances, oil etc. Consumer preferences too are changing. More and more consumers are shifting towards green cosmetics. This research paper tries to explore the opportunities and challenges prevailing in the path of green cosmetics. This research paper will be helpful for producers, markets and government agencies in developing strategies that will promote a more sustainable and responsible cosmetics industry.

Keywords- Green Cosmetics, Sustainability, Eco-friendly cosmetics, Cosmetic market, Organic products.

COII2024MBA014

Online media and its impact on consumer behavior

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ABSTRACT- Online media is playing a phenomenal role in today's time in the marketing field. Now through the online media, marketers can interact with our customers 24*7 and 365 days in the 21st century without the use of online media in the market is very tough to survive, where competition exists as a bottleneck , every movement of customers are important for marketers and their brand. Online advertising had a significant effect on consumer purchasing decisions. Thus, among other recommendations, it was proposed that

companies increase their use of internet advertising to encourage customers to make profitable purchases. Online media makes customers more efficient and saves time to make decisions. Online media is a boon for marketers.
Significance of this study
1. To maintain existing customers.
2. To create customers.
3. To spread awareness about products and services.
4. Customers can easily purchase.
5. Customers can easily compare products with substitute products.
Methodology- we are taking both qualitative and quantitative, we are taking data through the questionnaire, report, survey, and interview. Primary research involves collecting new data directly from individuals or sources,

Keywords: Online media, primary research, internet, substitute product.

COII2024MBA015

A BIBLIOMETRIC ANALYSIS ON THE GRAVITY OF ADVERTISEMENT IN TRANSFORMING CULTURE OF INDIA

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Abstract: The almighty while creating the world , had never thought that it would take an awful shape , and the people with their behavior would drive it to the brink of destruction as due to the continuous metamorphosis , the sisyphean change in the world around is not so much friendly, and is getting on the darker side in terms of behavior. India a prosperous country , and its prosperity lies in the people dwelling within it, the behavior of people few decades back was not so much towards the dark as in the recent times , the paper is a bibliometric analysis to identity up to what extent the work has been done with respect to advertisement transforming culture in India , using the aspect of citation analysis , co authorship analysis , co authorship analysis and also the bibliometric coupling to bring out the clear understanding of the terms. The database that is been considered is Dimension database , keeping in mind to give the correct analysis using the Vos Viewer the maps to bring out more clarity to the terms and work done, or what is more to be achieved the paper is an attempt to bring out the things which are still not been the part of analysis in a successful manner.

Keywords – Advertising , culture , transformation, bibliometric analysis , India

COII2024MBA016

Impact of Artificial Intelligence in Organized Retail Sector: An Exploratory Study of India

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Abstract - The organized retail sector in India has witnessed significant technology upgradation over the years, transforming the way retailers operate, engage with customers, and manage their businesses. The continuous technology upgradation in the organized retail sector of India reflects the industry's commitment to embracing innovation and meeting the evolving needs of consumers. As technology continues to advance, retailers are likely to explore and integrate more cutting-edge solutions to stay competitive and provide enhanced shopping experience. In continuation with the upgradation with technology, the integration of Artificial Intelligence (AI) technologies with Indian organized retail has indeed brought about significant changes, revolutionizing various aspects of the industry. The transformative era marked by AI adoption has influenced operations, customer engagement, and the overall trajectory of the sector. The importance of Artificial Intelligence (AI) in the organized retail sector is noteworthy, as it brings about numerous benefits and opportunities for retailers to enhance their operations, improve customer experiences, and stay competitive in a rapidly evolving market. As technology continues to advance, AI is expected to play an increasingly crucial role in shaping the future of the retail industry. The below article depicted and analyzed the importance & growth of AI in the Indian organized retail sector.

Keyword: Supply Chain Optimization, Operational Efficiency, Automation, Customer Engagement, Predictive Analytics, Data Analytics, Technology Integration

COII2024MBA018

INFLUENCE OF WESTERN CULTURE ON CURRENT GENERATION: IS IT AFFECTING INDIAN HERITAGE?

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ABSTRACT: Culture influences development from the moment we are born and making impact as we grow. India is treated as an example in the whole world when it comes to it's roots of tradition and culture. 'Culture' has components like ideas, customs, and social behavior of a particular people or society, which differs from region to region. Indian culture is somewhat different from the Western culture. India has it's own standing when it comes to culture and all the norms which are performed by Indians. There are different generations we have been through, which covers people born in between (1946-1964) as Baby boomers, (1965-1980) as Gen X, (1981-1994) as Gen Y, (1997-2012) as Gen Z and the one in continuity is Gen Alpha which will cover the people born in 2012 till 2025. Indians are good in adapting themselves according to the changing trends, they are on a track of opting western tradition as their main culture. Change is taking place in a positive sense and equally in the negative sense. Development of new fashion and lifestyle trends can be seen as a positive influence as it helps young people express their individuality and creativity. Earlier Indians used to prefer living in a joint family, but walking on the path of western culture, they now want to live with privacy. One of the most significant negative impacts has been the erosion of traditional Indian culture and values. The purpose of this article is to look at

many reasons that cause such fears and analyze them by comparing with reality and discuss about the impact of westernization.

COII2024MBA019

Managing Conflict in a Team: An Indian Scenario

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ABSTRACT: Conflict is the disagreement or difference of opinions between or among individuals that can be potentially harmful to any organization. In the workplace setting, it often involves personal agendas, insights, or goals versus the agendas, insights, or goals of the group or team. Conflict management seeks to resolve the disagreement or conflict with positive outcomes that satisfy all individuals involved or is beneficial to the group. However, the perception of conflict is often negative. Conflict can, in fact, be positive if it is managed properly. Conflict can promote team-building skills, critical thinking, new ideas, and alternative resolutions. Conflict management is a crucial competency that leaders must possess, for the success of the team, group, unit, or employees they lead. In the article the author investigates how conflicts are manage in a team in Indian scenario.

COII2024MBA021

Digital Transformation in Business

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Abstract : Digital transformation is a process of integrating digital technologies into all part of an organization,like in variety of products, services and operations,to deliver value to customers.It is driven by the ever increasing availability of digital applications on smartphones, laptop and other hardwares. The emergence of digital transformation has changed the business landscape for the foreseeable future.As scholar advance their understanding and digital transformation begin to gain maturity,it become necessary to develop a synthesis to create solid foundation. To do so significant steps need to be taken to critically, rigorously and transparently examine the existing literature.

COII2024MBA022

Human Robot Interaction (HRI): Whether it is New Opportunity for Marketers?

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Abstract: Technological advancements have made human robot interaction (HRI) a continuously evolving field. Robots can extend human sensory, psychomotor and Cognitive capabilities and compensate for certain intrinsic human limitations. Consequently, they can provide important roles in helping mentally or physically challenged individuals live more independently and improve their quality of life. Robots can also be used for a variety of task that poses safety risk to people, because of the increasing capabilities of robots. The role of human that assumes in HRI (Human Robot Interaction) may influence how that individual perceives a robot. Recent studies suggest however, that these impressions may be significantly altered over an interaction. It is being a new opportunities for marketers as it can be used to collect data on attendees or customers. Such as demographic information or purchase history. This data can be used to inform future marketing or sales strategies. Robot companies will leverage big data efficiently to make predictive analysis. Knowing and analyzing customer behavior will help companies understand user interest patterns and they can resonate with their marketing campaigns. It offers a wide range of potential benefits, including cost reduction, revenue growth, as well productivity gains, scalability, security as well as improved customer retention. The integration of robotics into marketing activities has enormous influence on marketing strategies such as business models, sales processes, customer service options as well as customer behavior. It is highly unlikely that it will completely replace marketers themselves. This study has important implications for human-robot interaction design as it further highlights that a first impression, merely based on a robot appearance. In this article the author depicted and analyzed the importance of HRI as a new opportunity for marketers.

COII2024MBA024

Harmony in Style: Exploring the Interplay of Lifestyle and Fashion

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Abstract: This extensive research seeks to delve into the intricate and symbiotic relationship between lifestyle choices and fashion preferences, aiming to unravel the nuanced threads that intricately weave the tapestry of contemporary style. The study employs a comprehensive analysis, delving into cultural, social, and personal factors to understand how individuals curate their wardrobes as extensions of their unique identities. By exploring the dynamic interplay between lifestyle and fashion, the research illuminates reciprocal influences—how lifestyle shapes fashion and, conversely, how fashion contributes to the expression of one's lifestyle. This inquiry provides insights into the evolving landscape of personal style, offering a nuanced understanding of the profound impact that the intersection of lifestyle and fashion has on individuals' self-perception and social representation.

COII2024MBA025

"Advancements in Artificial Intelligence: A Comprehensive Overview"

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Abstract: This paper explores the rapid evolution of artificial intelligence (AI), examining key technological breakthroughs, ethical considerations, and societal impacts. From machine learning algorithms to natural language processing, the study delves into the multifaceted dimensions of AI, emphasizing its transformative potential across various industries. Additionally, ethical frameworks and responsible AI practices are discussed to guide the responsible development and deployment of intelligent systems in our interconnected world. Artificial Intelligence (AI) has experienced rapid evolution in recent years, leading to groundbreaking advancements across various domains. This article explores some of the key developments that have propelled AI into new frontiers.

COII2024MBA026

VALUE OF YOGA IN EDUCATION WITH SPECIAL REFERENCE OF INDIA

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Abstract: The aim of Education is all development of the human personality. Therefore, education should provide opportunities for the physical, intellectual, spiritual, and moral development of the students. Physical fitness is the prerequisite of all development. If the body is not allowed to grow properly, then it can make one unfit for a normal healthy life. Education cannot ignore the importance of physical fitness. Physical education should be introduced in the school from the primary classes. All western and Indian philosophers Rousseau, Tagore, Aurobindo, agree the Physical Education should be given important place in the school curriculum. Simple breath and correct postural exercise of yoga, If properly taught in our schools can have a powerful,

COII2024MBA028

Innovative strategies of Hindustan Unilever limited (HUL) To Tap rural market of India

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Abstract: The complete study of ruler market strategy in developing countries. Such as India. The imperfection and riskiness of applying and testing of ruler market strategies in a international brand. This is study interpret the conception of ruler marketing and the profit of Indian National brands have achieved from it. Extremely in growing countries this entire study is full discussed including advantages and disadvantages as well as the profit and loss of multinational brands in ruler markets. The purpose of these paper is to gain a better understanding of the ruler market. The importance of ruler marketing in the status of the ruler market at the moment. The aim of identify the problem that ruler marketers face.
Innovative strategy to tap ruler market.

- Penetration pricing policy.
- Strong distribution network.
- Encourage managers to think farmers.
- Create goods and established price prices with ruler consumers in mind.
- Identify techniques for gross roots distribution.
- Provide services that ruler consumers requires.
- Establish new avenues for marketing.
- Use ladies to boost sales.

COII2024MBA029

The e-commerce revolution

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ABSTRACT: LEARNING OUTCOME: This teaching experience case will improve the critical they will be aware of the rights of the employees. CASE OVERVIEW: The case is all about the attention of management towards the employees.
COMPLEXITY ACADEMIC LEVEL: It is developed for PG and UGlevel students.

COII2024MBA032

TOPIC- Application of AI : IS IT BOON OR BANE FOR FUTURISTIC BUSINESSES.

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ABSTRACT: Artificial Intelligence is the simulation of human intelligence processes by machines, especially computer systems. There are specific application that are included in AI these are expert systems, natural language processing, speech recognition and machine vision. Now the question is HOW AI IMACT BUSINESS? According to Harvard review study it found that companies that incorporated artificial intelligence they saw the difference

in the growth rate and overall cos reduce up to 40% to 60%.Customer satisfaction is expected to grow b up to 25%for those business that use artificial intelligence. Businesse that use chat bots have seen an increase in sales of around 67% Now the second questioned WHAT IS THE FUTURE OF AI IN TH BUSINESS? Over the next five years, artificial intelligence in business disrupt over 300 million jobs worldwide, AI will also create new jobs and opportunities especially in developing, maintaining and using AI systems. AI technologies will provide businesses with analytics capabilities allowing them to extract valuable information from vast amounts of data .Implementing AI for businesses offer numerous benefits by automating routine tasks, increasing efficiency analyzing vast amount of data ,providing valuable insights and enhancing customer
Experience.

COII2024MBA034

Government Open Data: Is India Filling the Right Ditch?

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ABSTRACT: Open data refers to any content or data that is freely available for use as many times as one wishes. It is a unique contributor to the development of an economy. This paper highlights the challenges that can lead to missed opportunities resulting from inadequate management of open data in the Indian economy. To serve this purpose, three pillars—participation, efficiency, and transparency (PET)—have been used. The research is based on primary data collected from eastern Uttar Pradesh and Bihar and secondary data sourced from https://data.gov.in and other international organizations. Descriptive statistics have been used for the research. The findings suggest that challenges exist in areas of awareness, requirement and availability of data, disclosure of methodology of data collection, supporting infrastructure, and individual preparedness for participation, coupled with delayed uploading and updating. The benefits of open data (OD) can be reaped in areas of government programs, accessibility, and stakeholders' willingness to participate.

Keywords: open data, Indian economy, efficiency, transparency, participation.

COII2024MBA035

TECHNOLOGY ADOPTION AND UTILIZATION IN SMALL BUSINESS

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Abstract: Technology adoption may have a big impact on a small business's ability to earn a profit and withstand a recession. In particular, green technology may save energy expenses

while also lessening the impact on the environment. However, implementing new technology could come at too high of a cost for the typical small- to medium-sized company. Adoption costs include things like buying new machinery, updating old industrial equipment, and even covering the cost of intellectual and other property rights. Using a database of small businesses, the researchers produced and sent a survey questionnaire to 2,000 small businesses nationally. Out of the 475 questionnaires that were returned, 397 had legitimate responses, yielding a 20% response rate. The results of this study could be quite important. The study's conclusions could be important in determining whether owners of small businesses will use innovative energy-saving technologies to protect the environment, cut expenses, and increase profits.

COII2024MBA036

Role & Relevance of Schools, NGOs & 'Applications' in Managing Menstrual Health & Hygiene in Developing Contexts like India

(This paper is part of the investigation and study being carried out under the DST - CSRI project at BIT Mesra, Off Campus Noida)

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Abstract--In the contemporary world, women have demonstrated their indispensable role in society, making diverse and multifaceted contributions that are equally vital. It is imperative to acknowledge their importance as it is essential for fostering equality, well-being, and progress for all members of the community. However, when we make a comparison with rural areas, the empowerment and well-being of women often remain obscured by cultural taboos and stigmatization, hindering their ability to advocate for their rights. This is particularly evident in areas related to menstrual health, where it may not be immediately evident that women who menstruate encounter numerous challenges. Some of these challenges may appear unrelated, such as mental health, yet menstruation exerts a significant impact on it. Menstrual Health Management (MHM) plays a vital role in the quality of life of menstruating women. This research paper explores various aspects of MHM, aiming to provide insights into effective strategies for promoting menstrual health, reducing stigma, and improving access to necessary resources via a medium that can be provided to those with fewer facilities and a less understanding environment. Overall, this research paper aims to contribute to the ongoing dialogue on Menstrual Health Management, offering valuable insights to researchers, policymakers, and organizations who are working towards Menstrual Hygiene and well-being for all.

COII2024MBA038

The Challenges and Opportunities in the Digitalization of Companies in a Post COVID-19 World

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Abstract – COVID-19 has induced dramatic results on the arena Financial system, business sports, and those. But digitization is likewise supporting many agencies to adapt and overcome the current scenario because of COVID-19. The growth inside the use of technology inside the every day lives of human beings and organizations to stand this first-rate state of affairs is an evidence of the virtual acceleration system. This exploratory take a look at analyzes the impact of virtual transformation strategies in three business regions: hard work and social members of the family, advertising and marketing and income, and technology. The effect of digitalization is expected to be transversal to every region and will inspire the emergence of latest virtual services and products based on the precept of flexibility. Additionally, new methods of working will foster the call for for brand spanking new expertise regardless of humans's geographical area. Furthermore, cybersecurity and privacy becomes key elements so as to help the incorporated development of the internet of things technology solutions, artificial intelligence, huge statistics, and robotics.

Index Terms—. Covid-19, digitalization, human capital,Innovation, technology

COII2024MBA039

IMPACT OF E-COMMERCE IN INDIA: ISSUES & CHALLANGES

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ABSTRACT: Commercial center is quick transforming into e- commercial center now. Right from needle to ship, everything can be purchased on the web. With new and new players coming in, it is yet common for the current players and new contestants to think of creative systems to offer their merchandise and services. Electronic commerce is more than simply one more approach to support or improve existing businesses. Or maybe, e-commerce has brought revolutionary changes in the marketplace. It is a problematic invention that is drastically changing the conventional method of doing business. E Commerce is paving way for huge business development in our nation. Expanding web clients have further added to its development. Ecommerce has made online travel industry grow through numerous methods and included another business boulevard through online retail industry in our nation. The current study has been attempted to portray the present scenario and facilitators of E-Commerce in India, dissect the present patterns of E-Commerce and look at the obstructions of E-Commerce in India.

COII2024MBA042

Harnessing the Power of Online and Social Networks for Effective Brand awareness

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Abstract: In today's digital era, establishing brand awareness in online and social networks has become imperative for the implementation of successful marketing strategies. This research paper delves in the various methodologies and tactics undertaken by the by businesses to maximize their brand visibility and recognition in the vast domain of the internet. Through an in-depth analysis of current literature, case studies, and industry insights, this paper aims to provide a comprehensive understanding of the strategies and challenges associated with generating brand awareness online. From content creation and social media engagement to search engine optimization (SEO) and influencer partnerships, this paper offers actionable insights for businesses seeking to leverage digital platforms to enhance their brand presence.

Keywords- online branding----marketing strategies---brand awareness---social media---SEO—digital media---brand visibility----brand equity

COII2024MBA043

The effects of social media marketing initiatives on brand awareness, brand loyalty, and brand image

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ABSTRACT: The purpose of this study is to investigate how social media marketing initiatives affect brand loyalty, brand awareness, and brand image. Additionally, this research aims to analyse is to learn more about the ways in which social media marketing initiatives can impact a company's reputation and brand loyalty. The study explains about the theoretical knowledge of social media marketing and effects of social media marketing on brand. The results of this study demonstrated that brand loyalty and brand image are positively impacted by social media marketing initiatives. Moreover, the results of this investigation indicated that enhanced brand perception positively impacts brand allegiance. The results of this study add to our developing understanding of social media marketing initiatives and their effects on brand loyalty and image.

Keywords: Social Media Marketing Activities, Brand Awareness, Brand Image, Brand Loyalty

COII2024MBA044

Financial Risk Management by Indian Corporates using Derivatives – An analytical Review

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ABSTRACT: Derivatives are commonly used nowadays by various corporate segments based on their preferences for risk management, affordability, and overall policy framework adopted fro the purpose. Various business related risks and external risks are associate with the operations of business entities. Furthermore, with globalization and expansion of business overseas corporate management face additional challenges for such cross-border trading activities. New and innovative derivative products are being used in the traditional four segments of financial derivatives including forwards, futures, options and swaps. Price fluctuations of commodities and equities, cash flow volatility, sustainability of earnings, currency rate fluctuations and interest rate movements are major concerns for the corporate houses.

COII2024MBA045

Effect of Banking Scam on Indian Economy

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Abstract—Multiple loan fraud affects a significant number of banks and financial institutions, not just in the real estat industry but also in other industries. It has an annual impact resulting in a large amount of bad debts and financial losses fo lenders There were countless cases where consumers were denie credit at every level. Obtaining loans from a variety of financia entities against the same reassurance It was the bulk of the tim the real estate developers with annual revenues in the hundred of crores political and financial clout, as well as a thorough gras of how things work. The system works, however there are flaws that might be used. It was not alway doable.without the clea participation of the lending staff organizations.

COII2024MBA047

Gender equality in trade: Laws and Trends in India

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Abstract: Gender equality refers to equal access to resources and equal participation in social and economic spheres. Women's participation is crucial for trade to enhance. However, despite measures by the Indian government, their participation is very low. This paper provides an overview of legislation related to women prevailing in India and analyses the trend of their status on three themes- preparedness, safety and security and participation. The results reveal that despite the decrease in the gender gap in education, mortality rate, and labour force participation, they are inadequate. Further, the women are highly anaemic, their participation in politics is very low and crimes against them are alarming situation. Therefore, Governments to enhance women's preparedness by developing their skills, and health along with providing safety and security to participate in economic and political arenas of the economy. This paper contributes to academicians, policymakers and businesses in identifying needs and challenges faced by women and developing policies and products for developing women's human capital.

Keywords: Gender gap, preparedness, safety and security, participation.

COII2024MBA048

Impact of Technological Advancement on the Customer's Preferred Mode of Shopping Post COVID' An Analytical Comparison Between Brick & Mortar and Click & Mortar Business Model

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ABSTRACT: Unprecedented technological developments have caused a paradigm shift in consumer shopping behavior in the wake of the COVID-19 pandemic. This abstract uses a thorough comparison between the cutting-edge click-and-mortar model and conventional brick-and-mortar retailers to examine the significant influence of these developments on consumers' favored purchasing modalities. The retail industry has changed due to the emergence of e-commerce and contactless technology, which has made consumers reevaluate their choices. Once associated with traditional shopping experiences, brick-and-mortar stores today have to deal with the click-and-mortar model's seamless integration of digital resources. This study highlights the importance of technological interventions by examining the complex aspects impacting customers' decisions in these two domains. The emergence of augmented reality (AR) as a key technological factor influencing the customer journey is noteworthy. AR is being used in physical stores to improve the in-store experience by offering interactive product displays and virtual try-ons. On the other hand, the click-and-mortar approach blends the boundaries between the real and virtual worlds by utilizing augmented reality to create virtual stores and immersive online experiences. Moreover, data analytics and customized recommendations are explored in the comparison analysis. Conventional retailers are adjusting to technology advancements by applying data-driven insights to improve in-store consumer experiences. In the meantime, the click-and-mortar business model leverages cutting-edge algorithms to provide highly customized online shopping experiences, developing a customized strategy that appeals to each customer's unique interests. It is crucial for businesses to comprehend the delicate balance

between brick-and-mortar and click-and-mortar models as they navigate this newly altered retail world. In order to provide a smooth shopping experience, striking this balance necessitates a thorough understanding of consumer expectations and preferences as well as the seamless integration of technology. This study provides insightful information to stakeholders looking to strategically position themselves in the post-pandemic dynamic, where technological improvements serve as catalysts for the future of retail.

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