



E.G.S PILLAY ENGINEERING COLLEGE

An Autonomous Institution | Affiliated to Anna University

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EGSPEC

இ.சி.எஸ்.பிள்ளை பொறியியல் கல்லூரி (தன்னாட்சி)
ACCREDITED BY NBA (MECH. EEE, CSE, IT, CIVIL, ECE) & NAAC 'A' GRADE

www.egspec.org/symposium

PAPER PRESENTATION PROCEEDINGS

International Students Symposium

Humanizing Tech Through Impactful Interventions 2K24



- ◆ **Institution Overview:** E.G.S. Pillay Engineering College, established in 1995, is a self-financing educational institution located in Nagapattinam, Tamil Nadu.
- ◆ **Visionary Leadership:** Founded by Chevalier Dr. G.S. Pillay, the college exemplifies his commitment to excellence in education.
- ◆ **Affiliations:** Initially affiliated with Bharathidasan University, the college has been affiliated with Anna University, Chennai, since 2002.
- ◆ **Recognition:** UGC recognized under sections 2(f) and 12(B), with several departments designated as recognized research centers.
- ◆ **Accreditations:** The institution is accredited by NAAC with an A++ grade and has NBA accreditation for Tier-1 programs in B.E. and B.Tech.
- ◆ **Autonomous Status:** Gained autonomous status in 2017, approved by UGC and Anna University, enhancing academic freedom and curriculum development.
- ◆ **Programs and Initiatives:** Offers 9 undergraduate and 7 postgraduate programs, features 6 research centers, and actively engages with industries through MoUs for training and placements, along with operating EGSPEC Community Radio.



MISSION

- ◆ To provide world class education to the students and to bring out their inherent talents
- ◆ To establish state-of- the-art facilities and resources required to achieve excellence in teaching -learning and supplementary processes
- ◆ To recruit competent faculty and staff and to provide opportunity to upgrade their knowledge and skills
- ◆ To have regular interaction with the Industries in the area of R&D and offer consultancy, training and testing services To establish centers of excellence in the emerging areas of research
- ◆ To offer continuing education and non-formal vocational education programmes that are beneficial to the society

VISION

Envisioned to transform our Institution into a Global Centre of Academic Excellence



Dr.S.Manikandan

Dean - Technical Affairs & Research and Branding

Best wishes for a productive and innovative international technical symposium. Warmest greetings and success wishes to Humanizing Tech Through Impactful Interventions 2K24. for advancing technological advancements. May Humanizing Tech Through Impactful Interventions 2K24 foster cutting-edge discussions, knowledge sharing, and collaboration among global experts. Wishing you an engaging and informative technical symposium, driving progress in a multi disciplinary environment. Looking forward to a stimulating exchange of ideas and expertise at symposium.



Dr.K. Manikanda Kumaran

HEAD OF ADMINISTRATION

EGSPGOI

Knowledge bridges potential and achievement. Education illuminates the path to success,empowering individuals to reach their full potential.



Dr.S. Palanimurugan

ACADEMIC DIRECTOR

EGSPGOI

Dear Students,

The International Student Symposium: Humanizing Tech through Impactful Interventions offers a unique opportunity to share your groundbreaking work and contribute to a critical global conversation. I am excited to see the innovative solutions and insights that will emerge from this symposium.

As you prepare for your presentations, remember the importance of your research and the potential it holds to make a positive difference in the world. I wish you all the best and look forward to your contributions.

Your innovative ideas and research have the potential to shape a brighter future for humanity. I am confident that your contributions will inspire and enlighten us all.

I am confident that your participation in the symposium will be a valuable experience, filled with learning, collaboration, and inspiration. May your ideas and research make a lasting impact.

Best wishes,



Dr.S.Ramabalan

Principal

I am happy to note that the “International Students Symposium: Humanizing Tech through Impactful Interventions 2024” is organized with enthusiasm as the symposium of all departments. The areas that have been chosen for the presentation of papers are very vital in our day to day life. Explorations of the current theoretical developments and their application to solving engineering problems bring an opportunity to strengthen the technical proficiency of students of all Engineering disciplines. I am confident that this symposium will emphasize existing advanced areas of Engineering that counter the technological challenges of the current century and will provide a forum for integrating the knowledge and experience of experts of different fields. It is quite heartening to note that around 500 technical papers will be presented by the participants from all Engineering disciplines of various colleges during this symposium. This occasion will be a memorable and rewarding experience for all the blooming Engineers from the various institutions. I would like to express my special thanks and appreciation to all the members involved in creating this Symposium. I once again take this opportunity to congratulate the organizers and all the delegates for the successful conduct of theSymposium.

DEPARTMENT OF AIDS

Inspiring Youth to Transform Agriculture

Aditya Kurapati
Department of Computer Science and Engineering
VIT, Pune
aditya.kurapati23@vit.edu

Abstract:

This solution seeks to address challenges that discourage youth from pursuing careers in agriculture by incorporating modern technology and utilizing deep learning algorithms for comprehensive support. Key features include a **Black Box Monitoring System** that employs deep learning for real-time tracking of soil health and crop conditions, along with **Automated Recommendations** tailored to specific local environments and **Remote Monitoring** to enhance farm management efficiency. The platform also provides **weather and market insights** to assist farmers in adapting to fluctuating conditions. Additionally, it tackles financial obstacles through **Equipment Rental** and simplified **Labour Hiring**, while fostering direct connections with industries such as **Kissan**. By equipping youth with innovative tools and knowledge, this initiative promotes a new generation of sustainable agriculture and business development.

Keywords: Agriculture, Black Box Monitoring System, Automated Recommendations, Weather Insights, Market Insights, Kissan

NS LEARN: Enhancing Learning and Social Connectivity for Neurodiverse Children through Gaming

Ashutosh Kumar
Department of Computer Science and Engineering
IITM Janakpuri , Delhi
ashu32696@gmail.com

Abstract:

NS LEARN is an innovative gaming application aimed at supporting neurodiverse children by fostering an engaging, inclusive, and supportive virtual learning environment. This app combines educational gameplay with social interaction features, such as chat and Chabot functionalities, as well as a digital library for academic assistance. By mimicking real-life interactions and encouraging friendly competition, NS LEARN helps neurodiverse children connect with their environment and excel in their educational journeys. Furthermore, this project discusses future developments for NS LEARN, focusing on enhancements to boost diversity, incorporate virtual reality (VR) technology, and facilitate both professional and peer interactions. Ultimately, NS LEARN seeks to empower neurodiverse children, enhancing their social skills and academic development within a dynamic and interactive

platform.

Keywords: NS LEARN, Neurodiverse, Virtual Learning, Virtual Reality, Digital Library, Learning Experiences

Harnessing Technology: Machine Learning Approaches to Support Teen Mental Well-Being

Shrishti Singh

Department of Computer Science and Engineering (Specialization - AIML)

VIT Bhopal University

shubhasin05@ gmail.com

Abstract:

Teenagers today experience significant stress from academic pressures, social media, and interpersonal relationships, often leading to mental health challenges such as anxiety, depression, and loneliness. Many adolescents, however, are reluctant to seek help due to barriers associated with traditional therapy, which can feel inaccessible or unwelcoming. Instead, they tend to confide in peers or use anonymous platforms that offer a safe space for discussion. This trend highlights the urgent need for alternative support resources that resonate with young people. By leveraging machine learning techniques such as natural language processing for sentiment analysis, clustering algorithms for user segmentation, and recommendation systems for personalized content, we can develop engaging and accessible solutions that empower teens to seek the assistance they need and deserve, ultimately enhancing their mental well-being.

Keywords: Teenagers, Stress, Anxiety, Depression, Therapy, Peer Support, Anonymous platforms

Smart Pepper: AI-Assisted Defence Spray for Women's Safety

Shubha Singh

VIT Bhopal University

Department of Computer Science and Engineering

shubha.23bce10015@vitbhopal.ac.in

Abstract:

Traditional self-defence tools, such as pepper spray, often depend on manual operation, making them difficult to utilize during high-stress situations where quick action is vital. Many women find it challenging to react promptly to threats, which can lead to critical delays. Furthermore, these devices typically do not have the capability to automatically alert authorities or trusted contacts after an incident, leaving users exposed. To overcome these challenges, there is a need for innovative self-defence solutions that integrate deep learning techniques. By analysing real-time data from environmental sensors, including audio and video feeds, these systems can autonomously identify potential threats. This integration not only empowers individuals to act decisively but also ensures timely communication with emergency services, significantly improving personal security and boosting confidence in handling dangerous situations.

Keywords: Self-defence, Pepper spray, Threats, Deep learning, Real-time data, Video feeds

Enhancing Payment Processing and Record-Keeping in Supplier Relationships with Grocery Chains

Jatin Singh, Nikhil Kujur
Department of Computer Science and Engineering
DLS PG College
Ashok Nagar, Bilaspur (C.G)
jatinsinghmaravi@gmail.com, kujurnikhil0007@gmail.com

Abstract:

Sophia faced significant challenges while supplying products to a major grocery chain, primarily related to the payment process. Payments were often delayed for weeks, and disputes regarding the quality and quantity of her goods were common. A particularly troubling incident involved an extended wait for payment following a delivery, exacerbated by unclear records. Claims of discrepancies from the intermediary further complicated matters, as Sophia struggled to counter them due to a lack of transparency in the available data. This experience not only caused financial distress for her business but also highlighted the urgent need for improved communication and record-keeping in their transactions to ensure smoother operations.

Keywords: Supply chain, Payment, Delays, Transparency, Intermediary, Record-keeping

Deep Learning for Tumour Detection in Medical Images

Nishi Agrawal
Department of Biomedical Engineering
VIT Bhopal University
nishiagrwal2002@gmail.com

Abstract:

Early detection of cancer is vital for effective treatment and improved patient outcomes. However, the manual evaluation of medical images such as X-rays, MRIs, and CT scans can be slow and is often susceptible to human error. This idea focuses on developing an AI-assisted system that utilizes deep learning algorithms to accurately and efficiently identify early signs of cancer in medical imaging. By employing advanced machine learning techniques, the system will analyse extensive datasets of annotated images to detect patterns associated with malignancies. This innovative approach aims to provide radiologists with a valuable tool that enhances their diagnostic capabilities and supports timely interventions. By significantly streamlining the image analysis process, the AI-assisted system seeks to improve diagnostic accuracy and ultimately enhance patient care through earlier and more reliable cancer detection.

Keywords: AI-assisted system, Medical Imaging, X-rays, MRIs, CT scans, Patient care



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DEPARTMENT OF BIOMEDICAL ENGINEERING

SYNOCURA 24

**AN INTERNATIONAL SYMPOSIUM
ON INTEGRATING TECHNOLOGY
AND HEALTHCARE**

**SYMPOSIUM
ABSTRACT
PROCEEDINGS**



NANO INFUSED SEAWEED BIOMATERIALS:

A SUSTAINABLE FRONTIER IN FOOD PACKAGING TECHNOLOGY

Abrar Ahamed Rifayee T M, Shri Vasantha Kumar K L,

Mohamed Shafiudeen M Pavithra S

Biomaterials are crafted through the processing of polysaccharides such as starch, cellulose, chitosan, and alginate, along with proteins like soy protein, gluten, and gelatine sourced directly from natural biopolymers. Alternatively, some biomaterials are synthetically produced from sugar derivatives like lactic acid and lipids derived from plants or animals. Recently, seaweed, a marine resource, has garnered significant attention for its potential in biomaterial development. This study explores the innovative integration of seaweed extracts into diverse biomaterial matrices to harness its unique attributes for environmentally friendly and sustainable applications. Our investigation carefully examines the structural and functional properties of seaweed-nano infused biomaterials, demonstrating their remarkable mechanical strength, biodegradability, and biocompatibility.

TEEK SEED USAGE FOR WOUND HEALING

Vigneshwaran D, Mark Raj T, Rukmangathan GK

Wound healing is a complex biological process involving haemostasis, inflammation, proliferation. The potential of teak seed (*Tectona grandis*) for wound care, owing to their rich bioactive compounds like tannins, flavonoids, and saponins. These compounds exhibit significant antimicrobial and anti-inflammatory properties, crucial for preventing infection and reducing inflammation at the wound site. Additionally, teak seeds are rich in antioxidants, which neutralize free radicals and support cellular repair. Our study investigated the efficacy of teak seed extract in a wound healing ointment. The ointment was

formulated by extracting bioactive compounds and incorporating them into a topical base. Results indicated that the ointment significantly accelerated wound healing compared to standard treatments, evidenced by faster wound closure, reduced inflammation, and improved tissue repair. Wounds treated with teak seed ointment showed increased collagen synthesis, which is essential for tissue repair. The study also found that teak seed extracts minimized scarring by promoting better organization of collagen fibers. Histological analysis revealed stronger and more resilient healed tissue in treated wounds. These findings suggest that teak seed extracts could be a valuable addition to modern wound care formulations. Further research is warranted to explore their full potential in clinical settings, aiming to enhance patient outcomes in wound management.

KEYWORDS: Wound healing, *Tectona grandis*, Bioactive compounds, Antimicrobial, Anti-inflammatory, Collagen synthesis, Ointment.

Biochar and Bioplastic from Agricultural Waste: A Combined waste Valorization Approach

Dr. Prathiba R a, Kaviya V b, Manigandan P b, Preethi K b
Associate Professor, Department of Biotechnology, Vel Tech High Tech Dr.Rangarajan,
Dr.Sakunthala Engineering College, Avadi, Chennai.
III Yr, B.Tech Biotechnology Student, Department of Biotechnology, Vel Tech High Tech Dr.
Rangarajan Dr.Sakunthala Engineering College, Avadi, Chennai.

The utilization of agricultural waste to produce biochar and bioplastics offers significant opportunities for sustainable resource management. Produced by pyrolyzing organic waste materials like crop stalks and manure, biochar improves soil health, mitigates climate change, sequesters carbon, and improves the retention of nutrients and water. Bioplastics, derived from cellulose, starch, and lignin, provide environmentally friendly alternatives to traditional polymers used in agricultural films and packaging while lowering plastic pollution and reliance on fossil fuels. Agricultural waste needs to be removed, combined with plasticizers, and then moulded to create biochar or bioplastic. The procedures utilized to convert agricultural waste into these significant items are explained in this abstract. These processes not only make effective use of garbage but also encourage ecologically conscious behaviour and sustainable farming.

Keywords: Biochar, bioplastics, agricultural waste, pyrolysis, sustainable resource management, soil health.

FORMULATION OF NATURAL SUNSCREEN FREE FROM ZINC OXIDE AND TITANIUM DIOXIDE

Sri santhosi Balaji, Department of Biotechnology, Vel Tech High Tech

The ozone layer gives protection against harmful UV rays. In recent trend increase in global warming leads to depletion of this layer. UV rays has the potential to cause skin cancer. So, to protect our skin from UV rays sunscreen is used. Most of the available sunscreen in market contains chemicals such as zinc oxide and titanium dioxide. These chemicals as unique property that is., it has high SPF (Skin protection factor) which means it gives high protection againstsun's UV rays. But in recent studies it has been proved that both zinc oxide and titanium dioxide has the ability to form free radicals that can damage DNA and cells including to various skin disorder including skin cancer. To overcome this problem, we are synthesizing a natural sunscreen free from zinc oxide and titanium dioxide. Our sunscreen is formulated using carrot seed oil which has high SPF and relatively budget friendly compared to other oils. To this chemicals such Tinosorb M Tinosorb S are added to increase the efficiency of the sunscreen. Along with it we will be adding preservative and colliding agent such as aloe vera gel for storage purpose. After the production of the product sunscreen, it will be sent for various physical parameter test such as

Stability test, pH determination, SPF determination, Water resistance, etc and finally the product will analyzed. The sunscreen produced will be free from chemicals and budget friendly so that common people can use it.

Keywords: Skin cancer, Zinc oxide, Titanium di oxide, Carrot seed oil, SPF

DELONIX ELATA

Sharvin. T, Department of Biotechnology, Vel Tech High Tech

Delonix elata, commonly known as "white gulmohur," is a member of the Fabaceae family and is widely distributed in India. It holds significant medicinal value, traditionally used in various forms to alleviate rheumatic issues and gastrointestinal disorders. This study focuses on exploring the physicochemical properties and antioxidant activities of Delonix elata leaves, aiming to identify potential bioactive compounds. Phytochemical analysis reveal the presence of flavonoids, alkaloids, tannins, and phenolic compounds, which contribute to its pharmacological properties including anti-inflammatory, antioxidant, antimicrobial, and potential anticancer effects. The antioxidative potential of Delonix elata extracts is demonstrated through various assays, indicating their capability to scavenge free radicals and mitigate oxidative stress-related diseases. Understanding the medicinal properties and bioactive compounds of Delonix elata is crucial for harnessing its therapeutic potential and developing new pharmaceutical applications. This research lays the foundation for further investigations into specific bioactive compounds, their mechanisms of action, and clinical applications in treating inflammatory, oxidative stress- related, infectious, and chronic diseases.

Key Words: Delonix elata, Fabaceae family, Alkaloids, Tanins, Flavonoids, Oxidative stress, Chronic diseases

PHARMACOLOGY AND IMMUNOMODULATORY EFFECTS OF HERBAL OINTMENT ON FIRE BURN WOUND HEALING: EXTRACTION, FORMULATION, AND EVALUATION

H.Thendral, , Department of Biotechnology, Vel Tech High Tech

Burn wounds are a major medical concern due to the prolonged healing time and potential for complications. Herbal treatments offer a promising alternative to synthetic medicines, with potential for fewer side effects and enhanced healing properties. This study explores the pharmacology and immunomodulatory effects of a novel herbal ointment formulated to treat fire burn wounds. The ointment was created using extracts from *Tinospora cordifolia*, *Allium sativum*, *Ferula asafoetida*, and *Aloe barbadensis*, which have known wound healing through anti-oxidant, anti-inflammatory, and antimicrobial properties. The herbal extracts were prepared using standard extraction methods and will be incorporated into a topical ointment. The pharmacological evaluation of the formulation included the analysis of key active compounds, while the immunomodulatory effects were studied through in vitro and in vivo models. The results will demonstrate significant enhancement in wound contraction, reduced inflammation, and improved healing rates compared to control treatments. The combination of *Tinospora cordifolia* and *Aloe barbadensis* contributed to the immunomodulatory activity, while *Ferula asafoetida* and *Allium sativum* provided additional antimicrobial and healing benefits.

Key Words : Burn wounds, Herbal treatments, wound healing, pharmacology effects, immunomodulatory effects,

EcoPulp: Sustainable Paper Production from Agricultural Biomass Residues **Prathiba¹, Dharunesh B G², Priyanka M², Divya N²**

¹Assistant Professor, Department of Biotechnology, Vel Tech High Tech Dr Rangarajan Dr Sakunthala Engineering College, Chennai, India

²Department of Biotechnology, Vel Tech High Tech Dr Rangarajan Dr Sakunthala Engineering College, Chennai, India

ABSTRACT

Paper is an essential component of daily life and is used majorly in writing, printing, packaging. Deforestation results from the billions of trees that are taken down to make paper. Global warming is caused by the increased CO₂ emissions that result from this deforestation. However, the process of creating paper from wood contains a number of hazardous chemicals that have an impact on both the environment and human health. It is necessary to search for a suitable supplementary resource for paper production in order to address all of these issues. The strong demand for food among the growing population is causing the volume of agricultural waste to grow at an accelerated rate every day. Burning agricultural waste presents a number of environmental challenges for farmers around the world. This agricultural waste is a useful substitute for producing paper, which contributes to the reduction of pollution and the issue of deforestation. Utilization of agricultural wastes not only eliminates the disposal problems but also solves the pollution-related issues. This study essentially improves on the idea of "from waste to wealth for everyone."

KEYWORDS: Paper Production, Deforestation, Global Warming, Agricultural Waste, Environmental Impact, Pollution Reduction.

A review on implantation and analysis of E-Tattoo sensor in human interfaces

K.R.Raghuram¹, K.Oviya² and R.Venkatesan³

^{1,2,3} Department of Biomedical Engineering, E.G.S. Pillay Engineering College, Nagapattinam, India.

Raghuram.r2004@gmail.com, rajkarthi05976@gmail.com, vengatesan.r@egspec.org.

ABSTRACT

Electronic tattoos, colloquially known as e-tattoos, mark a paradigm shift in human-computer interaction. These tattoos, functioning as innovative interfaces, embed sensors and electronic components directly onto the skin. Offering discretion and comfort, they monitor physiological parameters, from vital signs to muscle movements and brain activity. This technology facilitates diverse applications, including health monitoring and gesture-based interactions, forging a more intuitive connection between humans and devices.

Despite their potential, challenges such as power supply, durability, and biocompatibility must be addressed for widespread adoption. Ongoing research endeavors seek to refine electronic tattoos, ensuring they become integral components of daily life. This review explores existing literature on e-tattoo sensing, examining methods, challenges, and future directions. It serves as a concise guide for advancements in this evolving human-computer interaction field.

Keywords: E Tattoo, human system interface, Biocompatibility, Gesture based interaction.

Exploring Anti-Angiogenic Drug Candidates for Breast Cancer: A Molecular Docking Approach

Santhanamari R¹, Praiselin Jenisha J¹, Veera Rahul V¹, Lenita A²

¹III Year student, Department of Biotechnology, Vel Tech High Tech Dr Rangarajan Dr Sakunthala Engineering College, Chennai, India

²Assistant Professor, Department of Biotechnology, Vel Tech High Tech Dr Rangarajan Dr Sakunthala Engineering College, Chennai, India

ABSTRACT

Triple-negative breast cancer (TNBC) is a very aggressive subtype of breast cancer that presents significant therapeutic challenges. It is distinguished by the absence of progesterone and oestrogen receptors as well as HER2 expression. Since these receptors are absent, there are fewer therapy alternatives available, which forces researchers to look into alternate therapeutic targets. Angiogenesis is an attractive target since it is the process of forming new blood vessels, which is essential to the growth and spread of tumours. The goal of this work is to use a molecular docking technique to identify possible anti-angiogenic medication candidates for TNBC. The angiogenic biomarkers BRCA1 protein, and thrombospondin were chosen because of their important involvement in the vascularization and development of tumours. To assess their binding affinities and interaction patterns, a wide range of small compounds, including kaempferol, TAS 116, paradol, gingerol, and hispidin, were computationally tested against these targets. The docking results show a number of strong candidates that have the ability to prevent TNBC angiogenesis and open up new treatment options. The objective of this study is to propel these candidates into preclinical development for targeted anti-angiogenic therapy in TNBC by providing a strong basis for future experimental validation.

KEYWORDS: Triple-Negative Breast Cancer (TNBC), Anti-Angiogenic Therapy, Molecular Docking, Angiogenesis Biomarkers, Thrombospondin, BRCA1.

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B.E - COMPUTER SCIENCE AND ENGINEERING

INFXTRON'24

Paper Presentation Proceedings

Name of the Institution and Address	Batch Members	Title of the paper	Abstract
Dept. of Artificial Intelligence & Data Science (AIDS), St Peter's Engineering College, Hyderabad, Telangana, (500014) India.	1.SAIDEEP M 2.SAI RAVI KIRAN S.V.N	Unmasking the Hidden Bias: A Study of AI Fairness in Decision-Making Systems	As artificial intelligence (AI) increasingly permeates decision-making processes across various sectors, concerns regarding fairness and bias have emerged as critical issues."Unmasking the Hidden Bias: A Study of AI Fairness in Decision-Making Systems," explores the mechanisms through which biases manifest in AI systems and examines their implications for societal equity. By analyzing case studies from diverse domains including hiring, law enforcement, and credit scoring we identify the underlying data sources and algorithmic processes that contribute to biased outcomes and we propose a set of best practices for mitigating bias, including enhanced transparency, stakeholder engagement, and the incorporation of fairness metrics in AI development. This study aims to contribute to the ongoing discourse on ethical AI, advocating for systems that not only enhance efficiency but also uphold principles of justice and equality. By unmasking the hidden biases in AI, we seek to foster a more equitable technological future.
Dept. of Artificial	1.SHIVASAI K	A study on	Artificial intelligence (AI)

<p>Intelligence & Data Science (AIDS), St Peter's Engineering College, Hyderabad, Telangana, (500014) India.</p>	<p>2.RAMU P</p>	<p>Transformative Economic Impact Of Artificial Intelligence</p>	<p>has the conceivable to recast many aspects of the economy, such as productivity, job creation, innovation, and customer experiences. As well as transformation to education and amusement, AI is changing Indian industries, and it refers to the significant and positive changes that AI technology can bring to the economy. However, the impact of AI on society is not without its apprehension. The use of AI has raised questions about privacy, job loss, and the potential for AI systems to perpetuate bias and discrimination. It is important for society to consider the potential benefits and drawbacks of AI. This will affect human suspicion for future bankruptcy. At the presence of Generative AI is increased by 7% of GDP growth in India.</p>
<p>Dept. of Artificial Intelligence & Data Science (AIDS), St Peter's Engineering College, Hyderabad, Telangana, (500014) India.</p>	<p>1.SAI VAMSHI B 2.VAMSHI B 3.UMA MAHENDRA VARUN J</p>	<p>Sensing Crop Nutrition Health: Deep Learning with IoT for Optimal Nutrient Management and Crop Advisory</p>	<p>Maize is an essential staple in the international food industry. Farmers encounter numerous obstacles in their efforts to sustain crop health and optimize yield. Maize crops are susceptible to a variety of nutrition deficiency. For the purpose of monitoring the nutrition in maize farms, an automated maize crop health monitoring system is being developed. The traditional method of identifying the nutrition involves controlling and identifying nutrition deficiency manually, which is a laborious and time-consuming process that demands a significant amount of human effort. For the purpose of monitoring</p>

			and recording the state of the maize crop at regular intervals, the model that was designed makes use of Internet of Things sensors on four distinct levels. In Level 1, camera sensors are utilized, in Level 2, soil moisture sensor is used for collecting soil information, in Level 3, a NPK sensor is used. The collected data is processed and analyzed using pattern matching, data analytic and deep learning techniques (Level 4) to detect the nutrient deficiency, its type and necessary support to make informed decisions and recommend the most effective pest control strategy.
Dept. of Artificial Intelligence & Data Science (AIDS), St Peter's Engineering College, Hyderabad, Telangana, (500014) India.	1.MANASA AGRAHARAM 2. NAGURI VEDA SREE 3. GANNOJI SOWMYA	Identification and Recognition of Maize Leaf Disease based on seven-layer Deep CNN Model	The agricultural sector is vital to India's economy, which ranks among the world's lowest. The lack of ability to accurately identify agricultural diseases has serious implications for global food security. The cultivation of maize is hampered by a number of diseases, including grey leaf spot, common rust, healthy leaf, and northern leaf blight. These diseases caused extensive damage to the maize plant's leaf, root, and stem, ultimately leading to a dramatic decrease in harvest. Classifying illnesses under human supervision is difficult and fraught with inaccuracy because there are such a vast variety of disorders.
Department of Cyber Security Dhanalakshmi srinivasan College of engineering and technology	1.BALAJI A 2.MANIMARAN B	Binary Exploration in Cyber Security	This C code has a potential vulnerability. Specifically, the function check_passwd compares the user-provided password (from the command-line argument) against the string "admin".

Chennai – 603 104			Since the strcmp function is used directly without input sanitization, the code could be vulnerable to buffer overflow or other types of input manipulation if the length of argv isn't appropriately checked. Also, storing passwords in plaintext is insecure.
Department of Computer Science Engineering A.V.C College of Engineering, Mayiladuthurai.	1. AMIRTHAVARSHINI M 2. ATCHAYA M 3. FIRNAS M	RANSOMWARE	Ransom ware is malicious software that encrypts files or locks users out of their systems, demanding payment for decryption. It often infiltrates through phishing emails, malicious links, or software vulnerabilities. Ransom ware attacks have surged in recent years, causing financial losses and data breaches for victims. Prevention through regular software updates, antivirus software, and cyber security training is crucial. Understanding the risks of ransom ware is vital for safeguarding against this pervasive threat.
Department of Computer Science Engineering A.R.J College of Engineering and Technology - Mannargudi	1. SIVASANKARI S	Behavioral Based Threat Detection System Using Machine Learning in a Zero-Trust Security Model	Traditional security measures like signature-based detection rely on known patterns, leaving systems vulnerable to unknown or evolving threats. The paper aims to develop a behavior-based threat detection system using machine learning, integrated into a Zero-Trust security architecture to improve threat detection and prevention.
Department of Computer Science Engineering Kings College of Engineering Thanjavur	1. SANJAY B 2. SEDHURAMAN V	Digital Virtual Interface in IoT	As technology advances more and more "things" began to appear in digital format, such as: tickets, agendas, books, electronic purses, etc. Internet of things encourages communication and integration of physical

			<p>objects with each other and people to automate tasks and improve efficiency. Digital objects like physicists should be part of Internet of Things but the different structures of these digital objects causes in most cases these digital objects can interact only with specific applications that know the specific format. Based on the problems in this paper proposes a structure that supports the generic construction of virtual objects irrespective of their business logic and their integration with other applications and "things".</p>
<p>Department of AIDS Kings College of Engineering Thanjavur.</p>	<ol style="list-style-type: none"> 1. OVIYA T 2. SHALINI R 3. SUJAYASRI A S 	Blue Brain	<p>Blue brain" is the name of the world's first virtual brain. It allows transferring all the substances of human brain to virtual brain like PC. That means a machine can function as human brain. In other words, human is does not live for thousands of years but the information in his mind could be saved and used for several thousands of years. Today scientists are in research to create an artificial brain that can think, response, take decision, and keep anything in memory. The main aim is to upload human brain into machine. So that man can think, take decision without any effort. After the death of the person the virtual brain can store the knowledge, intelligence, personalities, feelings and memories of that person that can be used for the development of the human society.</p>
<p>Department of AIDS Kings College of</p>	<ol style="list-style-type: none"> 1. KANIMOZHI M 2. MAHESWARI R 3. RISHA V 	Smart Electricity Meter	<p>The mankind's home has evolved as humanity itself and through history</p>

<p>Engineering Thanjavur.</p>			<p>humanity has observed the safety and comfort of their homes. The adaptation of homes to the modern times is now involved in a technological environment and constant innovation, especially in the control of appliances, safety, pleasure, the monitoring of electrical consumption, etc. These factors have allowed the integration of homes with IoT environments in what is known as smart home. In this work, an IoT smart sensor of electrical consumption in smart homes is presented which is capable to analyze the power consumption using mobile devices through a wireless connection. It contributes to decrease the economic expense for home owners and also allows observing and analyzing the electrical energy consumption of different electrical devices using mobile devices.</p>
<p>Department of CSE Sir Issac Newton College of Engineering Nagapattinam.</p>	<p>1. GRACY.S 2. RAVEENA.R 3. VIKNESHWARI.R</p>	<p>Image processing - based ml frame work for leaf classification and disease detection</p>	<p>Image processing techniques find applications in many areas, chief among which are image enhancement, pattern recognition, and efficient picture coding. Some aspects of image processing are discussed--specifically: the mathematical operations one is likely to encounter, and ways of implementing them by optics and on digital computers; image description; and image quality evaluation. Many old results are reviewed, some new ones presented, and several open questions are posed. This paper provides a comprehensive overview of contemporary image</p>

			processing technologies enhanced by machine learning.
Department of Computer Science Engineering Sir Issac Newton College of Engineering Nagapattinam.	1. AKSHAYA A	Extracting Mediterranean Hidden Fishing Hotspots Through Big Data Mining	Monitoring fishing activity is crucial for fisheries management and governments to ensure regulatory compliance and sustainable marine ecosystems. Big data analysis, particularly from Automatic Identification Systems (AIS), offers a way to reveal fishing patterns and hidden activities, such as illegal fishing. This paper presents a big data mining approach to estimate fishing activity distributions of AIS-carrying vessels in the Mediterranean from 2017 to 2022. By processing 1.6 billion data points, we identified hotspots of hidden fishing and assessed potential illegal activities. Our reproducible cloud-based method can aid management authorities in countering illegal fishing.
Department of Computer Science Engineering A.V.C College of Engineering, Mayiladuthurai.	1. GURUPRASAD RAMESH JADHAV 2. HARENI T 3. SUBASRI S	Cyber Security and Internet of Things	The rise of the Internet of Things (IoT) has revolutionized the way we connect with technology. From smart homes to industrial systems, IoT devices are creating a hyper-connected world, where everything from our refrigerators to city infrastructures can communicate and share data. This connectivity offers immense convenience and innovation but also introduces significant challenges. As billions of devices become interconnected, the sheer volume of data and the complexity of these networks make them prime targets for cyber attacks.

<p>Department of Computer Science Engineering A.R.J College of Engineering and Technology - Mannargudi</p>	<p>1. BHARATHI A</p>	<p>Illusion of truth the battle between deep fakes and AI detection</p>	<p>Deep fakes powered by advanced AI technologies, have raised significant concerns, particularly regarding the spread of false information. This article explores the central role of AI in detecting and mitigating the spread of deep counterfeiting. Examining real-time detection methods, case studies and future advances, we highlight how AI is being used to combat this growing threat. The article also addresses ongoing challenges in deep counterfeit detection and ethical concerns related to AI interventions</p>
<p>Department of Computer Science Engineering Kings College of Engineering Thanjavur</p>	<p>1. KARAN K 2.PRASANNA B</p>	<p>MongoDB: The Flexible NoSQL Database</p>	<p>Mongo DB is an open-source, No SQL database known for its flexibility and scalability. It stores data in flexible, JSON-like documents, allowing for dynamic and schema-less design. Mongo DB is widely used for web applications, mobile apps, and big data projects that require fast and efficient data storage and retrieval.</p>
<p>Department of Computer Science Engineering A.V.C College of Engineering, Mayiladuthurai.</p>	<p>1.KARTHIKRISHNA.R.V</p>	<p>virtual air board-A cost effective tools for teaching and presentation</p>	<p>A Virtual Air Board System is aimed at enhancing interactivity during online classes, meetings, and other collaborative settings. It allows users to draw on a screen using only their finger, fitted with a colorful point or a simple colored cap, thus eliminating the need for traditional writing tools such as markers or pens. To build this project, we will be utilizing computer vision techniques of OpenCV, a powerful and widely used open-source library for image and video</p>

			<p>processing. Python is the preferred language for implementing the Virtual Air Board System, owing to its exhaustive libraries and easy-to-use syntax. However, the basic concepts can be implemented in any language supported by OpenCV. Some of the key features of this system include the ability to choose the shape of choice, activate the camera upon running the application, draw in the air just by waving the marker object, display the drawing simultaneously on the white board window, and choose any color for drawing and clear the screen when needed. By providing a more interactive and intuitive virtual whiteboard system, the Virtual Air Board aims to revolutionize the way individuals collaborate in virtual environments.</p>
<p>Department of Computer Science Engineering Kings College of Engineering Thanjavur.</p>	<p>1.MOHANRAJ T.S 2.SIVAPRAKASH P 3.Karthikeyan E</p>	<p>Blind People Currency Detection</p>	<p>Implement a simple system currency recognition system applied on Indian bank note. The proposed system is based on simple image processing utilities that insure performing the process as fast and robust as possible. The basic techniques utilized in our proposed system include preprocessing, image segmentation with features extraction and finally deep learning based on neural networks. In this work, camera-based Indian rupee paper currency is trained to be recognized using very simple image processing utilities what makes the processing time is very short with acceptable accuracy.</p>
<p>Department of</p>	<p>1.ABHISEK S</p>	<p>Google Tulip</p>	<p>Google Tulip is a machine</p>

<p>Computer Science Engineering Kings College of Engineering Thanjavur.</p>	<p>2. MUTHEESWARAN S 3.Lexmadurai S</p>		<p>learning technology to improve profitability in the agricultural sector. Over the years, humankind has created lots of effective ways to communicate with each other. By using this technology in the plant kingdom we can communicate with our Tulip. Plants have the ability to transfer information from one plant of root to another plant.</p>
<p>Department of Computer Science Engineering A.V.C College of Engineering, Mayiladuthurai</p>	<p>1.AAKASH R 2.KALAIVANI G 3.MATHUMITRA R</p>	<p>Block Chain Application Of Block Chain For The Images</p>	<p>Block chain is a revolutionary technology enabling distributed databases with immutable data stored in interconnected blocks secured by cryptographic hash functions. This ensures data integrity, making the system resistant to tampering. Its decentralized nature also provides strong protection against DDoS attacks. Additionally, block chain has been proposed to enhance drug distribution systems to detect counterfeit medications.</p>
<p>Department of Computer Science Engineering A.V.C College of Engineering, Mayiladuthurai</p>	<p>1.AAKASH R</p>	<p>Image processing : face detection and recognition by machine learning</p>	<p>Face detection and recognition have emerged as crucial technologies in various applications like, including security systems, biometric authentication, and human-computer interaction. This paper explores the implementation of machine learning techniques for efficient face detection and recognition. Traditional methods like Haar cascades and Histogram of Oriented Gradients (HOG) are discussed alongside more advanced deep learning approaches, such as Convolutional Neural Networks (CNNs), which have demonstrated</p>

			superior performance in complex real-world scenarios
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Department of ECE

Abstract 1:

Automated Teller Medical Service Based on Ai Using IoT

R. Sriram, M. Vigneshvar, S. Vigneshwaran, M. Surenthiran
MRK Institute of Technology, Cuddalore

Abstract:

The use of medical information technology has become an important way to improve the level of medical services and medical quality. To introduce a easy access health facility at everywhere to reduce transportation in rural area we present a artificial intelligence. Health ATM with multiple diagnosis equipment at real time basis provide best service to diagnose with help of artificial intelligence. The very early-stage disease & early warnings to patients help to patients, physicians and care taker for better outcome in less.

Abstract 2:

Wireless Sensor Network

M. Priyadharshini, S. Mahalakshmi, S. Anitha, R. Raji
AVC College Of Engineering, Mayiladuthurai

Abstract:

In this presentation on wireless sensor networks, we will embark on a journey to uncover the intricacies of this cutting-edge technology. Wireless sensor networks are a network of spatially distributed sensors that communicate wirelessly to monitor physical or environmental conditions. These networks play a crucial role in various fields like environmental monitoring, healthcare, industrial automation and more. Wireless sensor networks (WSN) have emerged as a critical technology for wide range of applications, from environmental monitoring to industrial automation. Focusing on the key challenges such as energy, efficiency, scalability and security. Architecture of wireless sensor networks with sensor nodes gathering data and communication protocols facilitating seamless data exchange, forms basis of their functionality. Despite facing challenges like energy constraints and security issues, ongoing research and advancements aim to enhance efficiency and reliability of those networks. By exploring advancements and future trends in wireless sensor networks. In conclusion, this presentation endeavours to provide a comprehensive overview of wireless sensor network.

Abstract 3:

River Waste Collector by Buoys and Conveyors

V. Yokesh , B. Yuvaneshwar, R. Aruljothi ,S. Vijayalakshmi
University College of Engineering, Panruti

Abstract:

The paper, titled "**River Waste Collector**," aims to address the significant issue of water pollution in India by implementing advanced technology to clean riverways effectively. River water contamination primarily results from industrial waste, domestic sewage, and agricultural chemicals, severely impacting ecosystems and public health. Additionally, the status of water bodies and pollution mitigation efforts are discussed. The study emphasizes the urgent need for innovative technologies and community awareness to address pollution, highlighting the critical importance of protecting water resources and the environment. By promoting sustainable practices and effective waste management, Tamil Nadu can work towards restoring the health of its rivers and ensuring safe water for future generations. Given the immense waste generation, with Tamil Nadu alone producing over 13,422 tons per day, approximately 578 tons/day end up in water bodies, causing severe harm to aquatic ecosystems and biodiversity. The proposed solution involves an automated, environmentally friendly system that utilizes renewable energy, particularly solar power, to collect and remove floating waste from rivers. This system features a conveyor belt mechanism with barriers that concentrate waste towards the belt's mouth, where scoops collect and transport the

debris for recycling. The project ensures minimal disruption to aquatic life while enhancing water quality, restoring pH balance, and conserving ecosystems. By focusing on automation and sustainable energy sources, the "River Waste Collector" project offers an innovative approach to managing water pollution. It aims to preserve the health of rivers, protect marine life, and maintain the vital ecosystems that many communities rely on. This solution is not only a step towards a cleaner environment but also demonstrates a commitment to renewable energy and waste recycling practices, ultimately ensuring the sustainability and health of India's water bodies.

Abstract 4:

Smart Watch for Driver's Health and Safety Monitoring

C. Logeshwaran, K. Kokila, G. Harihara, G. Ramakrishnan
University College of Engineering, Panruti

Abstract:

The paper "**Smart Watch for Driver's Safety**" addresses the growing concern over road accidents caused by drivers' health issues. The project aims to develop a system that monitors a driver's vital health parameters using a smart watch integrated with a vehicle's control system. It seeks to prevent accidents by real-time monitoring and detecting abnormal conditions, such as heart rate spikes, drunken, fatigue, or sleep disturbances, and issuing timely warnings to the driver. The problem is highlighted by statistics, showing that a significant number of road accidents in India are caused by health-related issues like heart attacks, high blood pressure, and drowsiness due to poor sleep cycles and unhealthy lifestyles, particularly among long-distance drivers. The solution proposed involves equipping drivers with smart watches that monitor key health indicators such as heart rate, SPO2 levels, and sleep patterns. In the event of abnormal readings, the system triggers an alert and sends notifications to the vehicle's system, slowing it down safely while notifying nearby authorities for emergency assistance. The paper outlines a detailed procedure where the smart watch acts as a central hub, connecting to the vehicle to manage emergency situations. The benefits of this system include the prevention of road accidents, early detection of health problems, and ensuring the safety of both the driver and passengers by safely stopping the vehicle in case of an emergency. This innovative approach emphasizes the importance of driver health monitoring in reducing road accidents and enhancing safety on highways, especially for long-distance and public transportation drivers.

Abstract 5:

Emergency based Mini Solar-Powered Irrigation Pump

K. Arunkumar, B. Deshelva Prasath, M. Kaviyapriya, P. Dharshini
University College of Engineering, Panruti

Abstract:

The paper, titled "Emergency-based Mini Solar Irrigation Pump," aims to design a solar-powered irrigation system tailored for rural agricultural needs. Agriculture is a critical sector, providing food, raw materials, and employment globally. Traditional irrigation methods, reliant on electricity grids or diesel engines, come with high operational costs and environmental impacts. This project seeks to address these challenges by offering a sustainable, renewable solution through solar energy. The system's core consists of solar panels that generate electricity to power a water pump, delivering water to crops during dry seasons. This approach reduces reliance on grid power or fossil fuels, lowering operational costs and promoting environmental sustainability. The solar-powered irrigation system is especially beneficial in rural areas where access to reliable electricity is limited. The project builds on existing literature, incorporating innovations like portable solar panels and a mobile setup for increased flexibility. The solar panels are lightweight and can be moved easily to meet varying irrigation demands. The motor employed is efficient and powered entirely by solar energy, capable of delivering 2500 liters of water per hour with a maximum lifting height of 50 feet. A key focus is the optimization of energy use and cost-effectiveness. The total project cost is estimated at ₹19,998, including solar panels, a motor, a frame, and other necessary materials. The system is designed

to be both efficient and affordable, making it a feasible solution for smallholder farmers in remote locations. In conclusion, this project offers a practical, eco-friendly solution to the growing demand for sustainable agriculture, addressing both the environmental and economic needs of farmers.

Abstract 6:

Intelligent Traffic Light Control System for Emergency Vehicles

R Suriyamoorthy ,R Sivabalan
AAA College of Engineering and Technology, Sivakasi

Abstract:

Traffic congestion in metropolitan areas such as Bengaluru, Chennai, and Kolkata pose significant challenges for emergency vehicles, particularly ambulances. Delays caused by traffic jams can hinder timely medical care, potentially resulting in tragic outcomes. Traditional methods, such as using sirens, often fall short in heavy traffic situations. This project presents an Intelligent Traffic Light Control System designed to automatically detect ambulances in real-time and dynamically adjust traffic signals to facilitate a clear path. Utilizing CCTV cameras at traffic intersections, the system employs AI and Machine Learning algorithms to continuously analyze video footage for ambulance detection based on visual cues. Once an ambulance is identified, the traffic light changes to green, allowing the vehicle to proceed without delay. If the ambulance does not cross within a predetermined time frame, the signal reverts to its original state. This solution aims to improve emergency response times, reduce delays, and potentially save lives, representing a crucial advancement in urban traffic management.

Abstract 7:

Automatic Road Sign Detection and Vehicle Control Using Neural Networks

R Suriyamoorthy ,R Sivabalan
AAA College of Engineering and Technology, Sivakasi

Abstract:

Many road accidents occur due to the negligence of road signs and warnings by the driver driving the vehicle. In order to alert the drivers about the road signs and automated control of the vehicle, an automated smart road sign detection and vehicle control system has been designed and developed. The proposed system for automatic road sign detection and vehicle control using raspberry pi is designed to utilize the power of deep learning algorithms to accurately detect and recognize road signs in real-time. A camera is used to capture the road signs and the captured images are processed using VGG16 convolutional neural networks. The VGG16 convolutional neural network architecture has been chosen as the primary deep learning algorithm for this project due to its high accuracy and widespread use in computer vision applications. The VGG16 network is pre-trained on the image net dataset, which contains over 14 million images and 1,000 object categories. By fine-tuning this pretrained network on dataset of road sign images, it will achieve state-of-the-art performance in road sign detection and recognition. This deep learning-based approach allows for robust detection and recognition of road signs under various lighting and weather conditions, and even in cases of occlusion or partial obstruction. The use of the VGG16 network ensures that the system is both accurate and efficient, enabling real-time performance on a low-power platform such as the raspberry pi. This project has also implemented automated controlling of the vehicle based on the road sign detected in real-time. Overall, the integration of deep learning algorithms such as VGG16 along with the raspberry pi based embedded system into this road safety system represents a significant step forward in improving driver safety, preventing accidents on roads and contributes to the foundation of autonomous driving technology.

Abstract 8:

Path Finder AI-Enhanced Navigation for The Visually Impaired

V. Jeeva ,P. Shyam kathir sankar , A. Nitheesh kumar
University College of Engineering, Thirukuvalai

Abstract:

This project presents Path Finder, an innovative AI-powered navigation solution designed to enhance mobility and independence for visually impaired individuals. Utilizing advanced machine learning algorithms and real-time environmental sensing, Path Finder transforms a conventional walking stick into a smart navigational aid. Pathfinder AI is an innovative navigation tool designed to enhance mobility for visually impaired individuals. Utilizing Google Maps, it provides real-time, audio-guided directions tailored to user preferences. Pathfinder features voice-assisted guidance, providing users with auditory feedback on their surroundings and navigational cues. By analyzing the environment and identifying obstacles, Pathfinder ensures safe and efficient routes, empowering users to explore their surroundings with confidence. Additionally, the system incorporates a mobile app that allows for personalized route planning, community-sourced updates, and emergency assistance. By integrating cutting-edge technology with user-centric design, Path Finder aims to empower visually impaired individuals, promoting confidence and autonomy in their daily lives. Its intuitive interface and personalized features make it the ultimate companion for independent travel, bridging the gap between technology and accessibility.

Abstract 9:

IoT Based Intelligent Traffic Management System

A. Helan , D. Dhanushya, J. Augustin Raj, A. Rajadurai
St. Joseph's College of Engineering and Technology, Thanjavur

Abstract:

The IoT-Based Intelligent Traffic Management System aims to tackle urban traffic congestion by utilizing real-time data from IoT sensors like cameras, infrared sensors, and RFID tags. These sensors collect information on traffic density, vehicle speed, and pedestrian movement, allowing the system to dynamically adjust traffic signals for optimal flow. Through real-time data analysis and predictive algorithms, the system reduces congestion, fuel consumption, and emissions. It prioritizes emergency vehicles by providing clear routes and enhances safety by detecting traffic violations. The integration of vehicle-to-infrastructure (V2I) communication allows connected vehicles to receive traffic updates. Scalable and cost-efficient, this system is designed to be easily implemented into existing traffic infrastructure, contributing to smarter and more sustainable cities.

Abstract 10:

Garbage monitoring system using Arduino with ultrasonic sensor and buffer alert

Mahesh Boopathi J, Pradeep R, Veeramoorthi S
MRK Institute of Technology, Kattumannarkoil

Abstract:

This the purpose of maintaining the garbage by using IoT stuffs. By maintaining the garbage will be the sustainable of our environment from some pollution with wastage. It having the main theme to segregation of wastage before gets full of bins.

Abstract 11:

Video Steganography using Modified LSB Algorithm

K. N. Yamuna , A. Sravani
Vijaya Institute of Technology for Women Enikepadu , Vijayawada

Abstract:

Steganography is a technique in which some secret content will be embedded in a suitable cover file such as text, image, audio and video in such a manner that secret information remains invisible to the outside world. Majorly, performance of the steganographic method ultimately relies on the imperceptibility, hiding capacity and robustness.

Now a day, Video steganography is becoming an important and promising tool in various data hiding technologies. The proposed work mainly concentrated on modification of LSB of a pixel and the resolution while decoding is same as it was at the time of encoding.

Abstract 12:

Medical Service System Based on AI and IoT

Senthil Kumar V , Vishal A, Vishnupriyan .S
MRK Institute of Technology, Kattumannarkoil

Abstract:

The use of medical information technology has become an important way to improve the level of medical services and medical quality. To introduce a easy access health facility at everywhere to reduce transportation in rural area we present a artificial intelligence. Health ATM with multiple diagnosis equipment at real time basis provide best service to diagnose with help of artificial intelligence. The very early-stage disease & early warnings to patients help to patients, physicians and care taker for better outcome in less.

Abstract 13:

Auto Fire Off Fire Extinguisher Ball Using Drone

Thahjeef Mujjamil S M
Anjalai Ammal Mahalingam Engineering College, Kovilvenni -614403

Abstract:

The integration of Auto Fire Off (AFO) fire extinguisher balls with drones represents an advanced firefighting approach. This project aims to develop and implement a system where drones are used to deploy AFO fire extinguisher balls, improving response times and safety in emergency situations.

Abstract 14:

Image processing

Kamali M, Harikeerthana S, Kabila S
Kings College of Engineering, Punalkulam

Abstract:

Image processing involves enhancing and analyzing images using computational techniques. Methods such as filtering, edge detection, and segmentation are used to improve image quality or extract features. Recent advances in machine learning, particularly deep learning with convolutional neural networks (CNNs), have significantly impacted areas like medical imaging, facial recognition, and autonomous systems. This research examines key techniques for image enhancement and the growing role of AI in improving accuracy and efficiency in image-based applications.

Abstract 15:

IoT Auto Cut-Off Regulator

E. Joan Leo , VS. Karthikeyan ,M. Kavivarathan
Kings College of Engineering, Punalkulam

Abstract:

An Auto Cutoff Regulator is a safety device that automatically controls the flow of gases or liquids by monitoring pressure, flow rate, or volume. When preset limits are exceeded, it activates an automatic shutdown to prevent over-

pressurization or system failure. This ensures safety, efficiency, and energy conservation in various applications such as automotive, medical, and industrial systems.

DEPARTMENT OF EEE

GARBAGE MONITORING SYSTEM POWERED BY SOLAR ENERGY

Sneha A M 1 , Spandana S 2 , Mariyam N 3 , Rudresha S J 4 , Kiran Kumar G R 5
1,2,3 U G students, EEE Department, PESITM, Shivamogga

ABSTRACT

The use of solar energy ensures that the system can operate in remote locations and contributes to eco-friendly practices by minimizing carbon footprints. The proposed system thus presents a cost-effective, sustainable, and scalable solution for smart cities aiming to improve public health, cleanliness, and environmental preservation. With the growing concern for environmental sustainability and effective waste management, the need for a smart garbage monitoring system is more critical than ever. The "Solar Based Garbage Monitoring System" is a solution designed to enhance waste collection efficiency using renewable energy sources. This system utilizes solar power to operate sensors and communication devices, reducing the dependency on traditional electrical grids and lowering operational costs. The system integrates Internet of Things (IoT) technology, with sensors placed inside garbage bins to monitor waste levels in real time. When the bins reach a certain threshold, an alert is sent to a central system or mobile app, notifying waste management authorities for timely collection. This reduces unnecessary collection trips, saves fuel, and optimizes route planning for waste collection vehicles.

POWER GENERATION FROM WASTE MATERIALS HEAT AND SOLAR

Aishwarya P Jain*, Radhika L*, Shanthala K S*, Kalpana S'

U G students, EEE Department, PESITM, Shivamogga.

*Assistant Professor, EEE Department, PESITM, Shivamogga.

ABSTRACT

This work focuses on converting waste into electricity. The waste-to-energy process involves using trash from households, businesses, schools, hospitals, and other sources as fuel. Solid waste has become a significant pollution issue today. Electricity can be produced in various ways using different fuels, and the main objective of our project is to incinerate waste and transform it into electricity. This will be achieved by harnessing light energy through solar panels and distributing the generated electricity, while also reducing pollution through pollution control filters, such as roller filters. The ultimate goal is to minimize pollution, recycle and reuse waste, and produce electricity from it, helping to mitigate the effects of global warming.

SIGN TALK: REVOLUTIONIZING COMMUNICATION FOR THE DEAF COMMUNITY

C.Kalimuthu K.Surya V.Anush Raghav

ABSTRACT

In India, deaf individuals encounter significant communication barriers, leading to social isolation and limited access to essential services. This paper presents "Sign Talk", an innovative solution that utilizes a Raspberry Pi-based device for real-time video communication. By incorporating a camera for sign language recognition and a wristband for notifications, Sign Talk facilitates seamless interaction between deaf and hearing users. The system translates sign language into audible speech and vice versa, enhancing accessibility across various settings. Additionally, vibration sensors provide timely alerts for emergencies, ensuring safety and inclusivity. This multifaceted approach not only improves social interactions but also reduces communication costs, contributing to a more inclusive environment for the deaf community.

DEVELOPMENT OF IMPLANTABLE DEVICES; FROM AN ENGINEERING PERSPECTIVE

R.Naveenraj

Volgogradstate Medical University–Russia

ABSTRACT

This paper explores the evolution of pacemakers from their early beginnings to their modern-day iterations, focusing on the technical advancements that have shaped their design and functionality. We delve into the challenges faced by early pacemakers, such as issues with battery encapsulation and lead materials, and how these challenges were addressed through innovations in materials science and semiconductor technology. Furthermore, we discuss the transition from epoxy resin encapsulation to titanium housings, highlighting the improvements in durability and biocompatibility. Finally, we compare the surgical procedures involved in implanting early pacemakers versus modern ones, emphasizing the strides made in reducing invasiveness and recovery times.

PRECISION POWER CONTROL WITH ADVANCED PULSE WIDTH MODULATION

ABSTRACT

Pulse Width Modulation (PWM) is a widely adopted technique in modern power electronics that enables precise control of electrical power delivery. By modulating the width of digital pulses, PWM allows for efficient power management, reducing energy losses while maintaining high performance across various applications. This article explores the fundamental principles of PWM, its advantages, and its applications in diverse fields such as motor control, LED dimming, renewable energy systems, audio amplification, and heating. Despite the challenges, such as electromagnetic interference (EMI) and switching losses, advancements in PWM technology continue to enhance its performance and relevance. As industries embrace smart technologies and sustainable energy solutions, PWM remains a cornerstone in driving innovations in power control systems.

DEPARTMENT OF IT
A STUDY ABOUT
ARTIFICIAL INTELLIGENCE IN AGRICULTURE

Divya. R, M.C.A

A.V. C College Of Engineering, Mannampandal.

Affiliated to Anna University

Mail ID: ramalingamdivya841@gmail.com

Abstract:-

The application of AI in agriculture has been widely considered as one of the most viable solutions to address food inadequacy and to adapt to the need of a growing population. This review provides an overview of AI's application in agronomic areas and progress in research labs. The review first presents two fields that AI can potentially play an important role in, which are soil management and weed management and then Internet of Things (IoT) a technology that shows great potential in future usage is mentioned.

**TITLE: AUTO RECON TOOL FOR CYBERSECURITY
RECONNAISSANCE**

Balaji. A, Manimaran. B

Dhanalakshmi Srinivasan College of Engineering and Technology, Chennai.

Affiliated to Anna University

Mail ID: maranmani5318@gmail.com

Abstract:

The Auto Recon Tool is an advanced cybersecurity software designed for efficient reconnaissance, assisting security professionals in identifying vulnerabilities within target systems or networks. Its primary purpose is to streamline the process of collecting vital security data, enabling organizations to enhance their defence strategies before potential threats emerge. Through domain enumeration, DNS analysis, port scanning, and content discovery, the tool delivers critical insights into the security posture of systems. This paper outlines the functionalities, applications, and importance of the Auto Recon Tool in penetration testing, vulnerability assessments, and proactive threat mitigation.

BCM-OPT ALGORITHM : OPTIMIZING AI AND ROBOTICS THROUGH BALANCE-CHAOS MATHAMETICS

Mohammed Hassan. H

ARJ College of Engineering, Adirampattinam.

Affiliated to Anna University

Mail ID: true.guy123@gmail.com

Abstract:

The Balance-Chaos Mathematics (BCM) Opt algorithm is an innovative solution in the optimization field, specifically tailored for AI and robotics. The algorithm introduces Meta-Infinite Zeros (MIZ) and Threshold Zeros (TZ), which stabilize recursive optimization processes. This stabilization addresses challenges such as vanishing gradients, overfitting, and local minima. The algorithm has been tested in neural networks, reinforcement learning, and real-time autonomous systems. By integrating novel mathematical frameworks, BCM-Opt optimizes the performance of AI systems across diverse tasks. This paper discusses the algorithm's structure, real-world applications, and benchmarking results, proving its effectiveness in improving convergence and accuracy.

XENOBOTS : THE SELF-REPLICATING LIVING ROBOTICS

Rohith.V, M.C.A,

Mathavan.M , M.C.A

A.V.C. College of Engineering, Mannampandal, Mayiladuthurai-609305.

Affiliated to Anna university

Mail ID: rohithnw@gmail.com

Abstract :

Xenobots are programmable organisms made from stem cells and developed by researchers at the University of Vermont, Tufts University, and the Wyss Institute. The millimetre sized beings were derived from African clawed frog embryos and exhibit a variety of behaviors, including selfreplication and cooperation. Scientists hope to understand cellular communication and potentially use xenobots in areas such as environmental cleanup, drug delivery, diagnostics, and treatment. In medicine, xenobots could operate nontoxicly, stopping the delivery of drugs, targeting and digesting toxins, or treating specific parts of the body. They could also contribute to regenerative medicine by using patients' cells to repair organs or create transplanted organs. Environmental and ecological impacts could occur if xenobots disrupt natural ecosystems or behave aggressively because they can replicate themselves. There is also malicious use, as programmable viruses can be ordered to be used for malicious purposes, posing a risk of terrorism or war. There are ethical questions about the use of living cells and their behavior, the possibility of creating xenobots with brains, and the difficulty of understanding their use.

TITLE : AUTOMATIC IV SHUTOFF VALVE MACHINE SYSTEM

Jaishini.S , Nivetha.M ,

E.G.S Pillay Engineering College, Nagapattinam-611002

Affiliated to Anna University

Mail ID: jaishinisamidurai@gmail.com

Abstract :

This paper presents a remotely monitored saline level and automated alarm system aimed at enhancing patient safety during intravenous (IV) therapy. By integrating a microcontroller, load cell, switching valve, and GSM module, the system continuously monitors saline infusion levels and alerts medical staff to potential issues such as over-infusion or air bubbles. This solution is particularly beneficial during night hours when oversight may be reduced, ensuring accurate IV administration and timely notifications. Ultimately, this system represents a significant advancement in patient care, aiming to improve safety and healthcare delivery.

TITLE : DIGITAL TWIN TECHNOLOGY

Mohamed Jasim.A

E.G.S Pillay Engineering College, Nagapattinam-611002

Affiliated to Anna University

Mail ID: mohamedjasim830@gmail.com

Abstract:

Digital Twin Technology (DTT) is a transformative innovation in the realm of engineering and data analysis. It creates a virtual representation of physical assets, processes, or systems, allowing for real-time monitoring, analysis, and optimization. This paper discusses the core concepts, applications, and challenges associated with DTT. Digital Twin, Virtual Model ,Real-time data, simulation ,Internet of Things (IoT),Predictive Maintenance, Smart Manufacturing, Data Integration, system optimization, smart cities, asset management, performance monitoring ,machine learning, cyber-physical systems.

TITLE : HUMAN-COMPUTER INTERACTIONS

Kamal.C , Manikandan T

E.G.S Pillay Engineering College, Nagapattinam-611002

Affiliated to Anna University

Mail ID: kamalchellapandiyan@gmail.com

Abstract:

Human-Computer Interaction (HCI) is an interdisciplinary field that explores the design and use of computer technology, focusing on the interfaces between people (users) and computers. The primary goal of HCI is to improve usability and user experience by creating systems that are intuitive, efficient, and accessible. This field emphasizes user-centered design, involving users in the development process to better meet their needs. By leveraging principles from psychology, design, and computer science, HCI seeks to foster effective communication between humans and machines, ultimately enhancing productivity and satisfaction in digital interactions.

TITLE : NEUROMORPHIC COMPUTING

Jasmin S,JothiPraba K

E.G.S Pillay Engineering College, Nagapattinam-611002

Affiliated to Anna University

Mail ID: jasminsalamon20@gmail.com

Abstract:

Neuro-inspired computing chips, modeled after the biological brain, offer promising advancements in AI by enhancing power efficiency and computing power. These chips, incorporating neuro-inspired innovations at various levels, are still in the early stages of development. This study reviews the origins and progress in neuro-inspired chips, identifying key performance metrics: computing density, energy efficiency, computing accuracy, and learning capability. It also examines the challenges and co-design principles of large-scale chips using non-volatile memory (NVM) and outlines a roadmap for future development, including the electronic design automation (EDA) tool chain.

TITLE: CYBER SECURITY

P.Gayathri, R.Agalya

A.V.C College of Engineering, Mannampandal.

Affiliated to Anna University, Chennai

Mail ID: gayathri31104@gmail.com

Abstract:

Cybersecurity is the critical practice of protecting digital information, networks, and computer systems from unauthorized access, use, disclosure, disruption, modification, or destruction. As our reliance on technology grows,

the threat landscape evolves, posing significant risks to individuals, businesses, and governments worldwide. Cybersecurity threats, ranging from malware and phishing to ransomware and advanced persistent threats, can compromise sensitive data, disrupt operations, and undermine trust. Effective cybersecurity measures are essential to safeguard digital assets, prevent financial losses, and ensure national security. By implementing robust security protocols, staying informed about emerging threats, and promoting a culture of cybersecurity awareness, we can mitigate risks and protect our digital world.

TITLE: ARTIFICIAL INTELLIGENCE

R. Praisi , S. Bhuvana

Sir Issac Newton Arts and Science College, Pappakovil, Nagapattinam.

Affiliated To Bharathidasan University

Mail ID: praisi2004@gamil.com

Abstract:

Artificial Intelligence (AI) is the technology that enables machines to simulate human intelligence processes such as learning, problem-solving and decision -making. The history of AI dates back to the 1950s, with key contributors from pioneers like Alan Turing and John McCarthy, who coined the term “**Artificial Intelligence**”. AI has various applications, including natural language processing, speech recognition and machine vision. This paper explores the types and main groups of AI, its advantages such as reduced human error and unbiased decision-making, as well as its disadvantages, like lack of creativity and ethical concerns. Additionally, we delve into the potential future impact of AI by 2035 and examine notable AI systems, such as Sophia the humanoid robot.

TITLE: ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING RECONNAISSANCE

Rakshahya N , Mahasri R

Sir issac newton collage of arts and science , Nagapatinam.

Affiliated to Bharathidasan University.

Mail ID: Rakshahyanatarajan832@gmail.com

Abstract:

Artificial Intelligence (AI) and Machine Learning (ML) have transformed various industries by enhancing automation, decision-making, and problem-solving capabilities. This paper explores the foundational concepts, history, types, impact, and potential future directions of AI and ML. We discuss the evolution of these technologies, their current applications, and their profound impact on society, along with the ethical considerations they raise. The future holds vast opportunities for AI and ML in healthcare, finance, transportation, and more, but challenges such as data privacy and algorithmic bias remain.

DEPARTMENT OF MBA

Opportunities and challenges in start-up business in today's India.

P. Dharshini, K.Dhirhana, 1-MBA

Department of business Administration, Rabiammal Ahamed Maideen College for women, Thiruvarur.

Abstract: "India's start-up ecosystem is at an inflection point, with unprecedented opportunities for growth and innovation. Nevertheless, entrepreneurs must confront formidable challenges to sustain and scale their businesses. This paper presents an in-depth analysis of the opportunities and challenges in India's start-up landscape, offering recommendations for stakeholders to foster a conducive environment for entrepreneurial success."

Opportunities and Challenges in Start-up Businesses in Today's India

Akshya.s and Mohanprakash from Achariya arts and Science College, Puducherry.

Abstract: The start-up ecosystem in India has rapidly evolved in recent years, making India one of the top start-up hubs globally. With over 50,000 start-ups operating across various sectors, the country has seen exponential growth in innovation, employment, and economic value. Start-ups are now recognized as key drivers of economic development, job creation, and industrial growth. However, navigating this landscape comes with both opportunities and challenges.

Start-up Culture in India: A Focus on the Hotel & Restaurant Industry

Arun Sathyan, HR Head, The Monarch Hotels and Convention Centre by City Group of Companies, Trivandrum, Kerala.

Abstract: India, with its rapidly expanding middle class, diverse culture, and tech-savvy population, has seen significant growth in its start-up ecosystem, particularly in the hotel and restaurant industry. This industry has undergone a transformation through technology-driven solutions and innovative business models, revolutionizing consumer experiences and addressing long-standing challenges. The rise of digital platforms like Zomato and Swiggy has redefined food delivery, while cloud kitchens, such as those operated by Rebel Foods, have reduced overhead costs and facilitated rapid scalability. Similarly, start-ups like OYO have disrupted the budget hotel sector by using technology to offer standardized, affordable accommodations. Despite the immense opportunities, entrepreneurs in this sector face challenges including regulatory hurdles, intense competition, and the need to continuously innovate. The industry's future lies in personalization, expansion into tier-2 and tier-3 cities, sustainable business practices, and technological advancements like automation. As the industry continues to grow, start-ups will remain at the forefront, driving its evolution and reshaping India's hospitality and dining landscape.

Start-up Culture: A Comparison between Singapore and India

Mr. I. Rahamathulla Rafique, Country Manager / Director, Biz4x Pte Ltd., Singapore

Abstract: Singapore's start-up ecosystem thrives on strong government support, grants, and tax incentives, while India's rapid growth is driven by initiatives like Startup India, despite bureaucratic hurdles. Singapore offers robust access to venture capital and serves as a gateway to Southeast Asia, whereas India has seen a surge in unicorns, though early-stage funding is limited in smaller cities.

Singapore's small market requires regional expansion, while India's vast market of 1.4 billion fuels growth in fintech and e-commerce. Singapore has a highly skilled workforce but high costs, while India's large talent pool faces skill gaps. Entrepreneurship is respected but risk-averse in Singapore, while India is seeing a cultural shift towards embracing start-ups.

To conclude: Singapore: Strong support but needs regional expansion. India: Huge market and talent, but faces regulatory challenges. Entrepreneurs should consider their industry focus and growth strategy when choosing between these ecosystems.

Uses of AI in management

P. Monisha & R. Praba, I MBA, Department of Management Studies,

E.G.S.Pillay Engineering College, Nagapattinam – 611002, Tamil Nadu.

Abstract: This presentation discusses how Artificial Intelligence (AI) is changing management in organizations. We will look at how AI helps improve decision-making, automate tasks, and personalize customer service. Through real-life examples from different industries, we will show how AI can make processes more efficient, improve resource use, and boost employee productivity. We will also consider some challenges, like data privacy and the impact on jobs, that come with using AI. The goal is to help organizations understand the benefits of AI and how to use it effectively in their management practices.

DEPARTMENT OF MCA

THE IMPACT OF SOCIAL MEDIA ON SOCIETY: A COMPREHENSIVE STUDY

Aarthy. -A PG Student II MCA Department of Computer Applications,
E.G.S. Pillay Engineering College, Nagpattinam
Email: aarthyashok575@gmail.com

ABSTRACT:

This paper explores the transformative role of social media in society, examining its impact on communication, business, education, and social interactions. The study analyzes current social media systems, their shortcomings, and proposes enhancements to improve user experience, security, and ethical considerations. It also outlines a methodology for studying social media's impact through surveys, data analytics, and user behavior analysis, and suggests future directions for platforms to foster more meaningful, safe, and constructive engagement.

Keywords: transformative, ethical consideration, data analytics.

GENERATIVE AI: A CATALYST FOR INNOVATION ACROSS INDUSTRIES

Gayathri K PG Student I MCA Department of Computer Applications,
E.G.S. Pillay Engineering College, Nagpattinam
Email:

Generative AI is revolutionizing how we approach design and marketing, empowering users to create and personalize like never before. As these tools become integral to various industries, understanding their implications is essential for staying competitive. In consumer insights, generative AI breathes new life into existing proprietary research data, transforming it into valuable insights accessible across the organization. This innovation not only saves resources but also minimizes redundant primary research. AI agents can simulate conversations with specific personas, enabling quick testing of value propositions and gathering actionable feedback.

Keywords: Generative AI, redundant, quick testing.

OVERVIEW OF ARTIFICIAL INTELLIGENCE IN ROBOTICS

Vignesh. G - II MCA PG Student Department of Computer Applications ,
E.G.S. Pillay Engineering College, Nagpattinam
Email: vigneshvcy3005@gmail.com

ABSTRACT:

Artificial intelligence (AI) refers to the simulation of human intelligence processes by machines, particularly computer systems. These processes include learning, reasoning, and self-correction. AI technologies leverage algorithms and vast data sets to perform tasks that traditionally required human intelligence, such as language understanding, decision-making, and pattern recognition. The evolution of AI has led to advancements in various fields, including healthcare, finance, and autonomous systems, raising both opportunities and ethical considerations. As AI continues to integrate into daily life, its impact on society and the economy becomes increasingly significant, prompting discussions about governance, transparency, and the future of work.

Keyword: decision making, pattern recognition, transparency.

SMART AGRICULTURE MANAGEMENT SYSTEM USING IOT

Arunkumar.K - II MCA PG Student Department of Computer Applications ,
E.G.S. Pillay Engineering College, Nagpattinam
Email: arunarunkannan720@gmail.com

ABSTRACT:

This paper outlines the design and implementation of a smart agriculture management system utilizing Internet of Things (IoT) technology. As agriculture increasingly faces challenges such as climate change, resource depletion, and the need for higher yields, integrating IoT solutions can provide innovative approaches to enhance

productivity and sustainability. The proposed system employs a network of sensors to gather real-time data on soil moisture, temperature, humidity, and crop health. This data is transmitted to a cloud platform where it is analyzed to generate actionable insights. By automating irrigation and pest management processes, the system aims to optimize resource utilization, reduce operational costs, and improve crop yield, thereby addressing the critical needs of modern agriculture.

Keyword: IOT, productivity, utilization, sensors.

BLOCKCHAIN TECHNOLOGY AND CRYPTOCURRENCY

Vinoth. P - II MCA PG Student Department of Computer Applications ,
E.G.S. Pillay Engineering College, Nagpattinam
Email: vinoth24fx@gmail.com

ABSTRACT:

Blockchain technology has become a powerful disruptive force, with the potential to completely transform digital security and trust. Blockchain technology, originally developed for digital currencies, has evolved to offer transformative prospects for enhancing financial security and efficiency beyond its initial application. This review paper explores the expansive utility of blockchain technology across various domains. Significant developments have been made in the financial sector through cryptocurrencies specifically bitcoin towards the adoption of blockchain technology compared to other sectors. However, blockchain may not be entirely immutable as nodes with superior computing power may do anything from changing the blocks to manipulating transactions. Full adoption of blockchain technology may impose significant risks to banks ranging from cyber-attacks to loss of financial and nonfinancial data and capital investments for early adopters migrating from legacy systems.

Keyword: digital security, blockchain, cryptocurrencies, immutable.

DEEPPFAKE DETECTION

Abinaya. R - II MCA PG Student Department of Computer Applications ,
E.G.S. Pillay Engineering College, Nagpattinam
Email: abinayaravikumar.24@gmail.com

ABSTRACT

Deepfake technology has emerged as a significant challenge in today's digital age, with sophisticated AI models capable of generating hyper-realistic video and audio content. The potential misuse of deepfakes has raised concerns in various sectors, including media, cybersecurity, and politics. This paper reviews deepfake detection methodologies, highlighting the challenges posed by these advanced forgeries and proposing solutions to enhance detection accuracy. We discuss existing system limitations and explore novel approaches that leverage deep learning, computer vision, and signal processing to address these gaps. Our proposed system offers a modular structure to improve detection speed and accuracy while adapting to evolving deepfake creation techniques.

Keyword: Sophisticated, deepfake, detection, accuracy.

PREDICTIVE ANALYTICS IN DATA SCIENCE FOR BUSINESS INTELLIGENCE SOLUTIONS

Durga.S II MCA PG Student Department of Computer Applications
E.G.S. Pillay Engineering College, Nagpattinam
Email: durgasubramanian1714@gmail.com

ABSTRACT

In modern era of computing, organizations are focusing on the better utilization of technology and surviving to gear up with global business demand. Such competition is acting as a driving force for its business to cope with the data generated every second of the minute. This data needs to be sorted and segregated with the information required for the business growth model. Predictive Analytics (PA) uses

various algorithms to find different patterns in large data that might suggest efficient behavior for business solutions. This paper provides a conceptual decision-making process for data using predictive analysis to maximize the success ratio for handling large datasets. Today, different technologies like cloud computing, and SOA, are together transforming information technology but in turn, are imposing new complexities on data computation. Such advances in technologies, and it requires rapid and dynamic data analysis for structured and unstructured data.

Keyword: Predictive analysis, decision – making, SOA, cloud computing.

LOAD BALANCING IN CLOUD COMPUTING

E. Deepasri – II MCA PG Student Department of Computer Applications
E.G.S. Pillay Engineering College, Nagpattinam
Email: deepasrirac@gmail.com

ABSTRACT:

Load balancing is pivotal for enhancing resource utilization and system efficiency in cloud computing environments. This collection of research papers offers a comprehensive view of the field. The first paper surveys various load balancing techniques, detailing both static and dynamic methods and discussing their performance and challenges. The second study investigates ongoing issues and future directions, focusing on scalability, fault tolerance, and the need for more adaptive strategies. The third paper introduces hybrid algorithms that combine multiple load balancing approaches to dynamically adjust to changing conditions, aiming to improve performance and resource management. Together, these papers provide valuable insights into current load balancing methods, highlight existing challenges, and propose innovative solutions for optimizing cloud computing systems. They collectively advance the understanding of effective load balancing in dynamic and scalable cloud environments.

Keyword: Load Balancing, efficiency, hybrid algorithm, fault tolerance.

FIT TRACK MOBILE APP

GunavathI.M - II MCA PG Student Department of Computer Applications
E.G.S. Pillay Engineering College, Nagpattinam
Email: sanjiniguna02@gmail.com

The 'fit track mobile app' app is designed to monitor personal health on daily basics Record your BMI, PhysicalActivity, smoking, alcohol blood pressure, cholesterol, and weight and activity results in the app. Then follow the advice of your health checker and the information in the app to track your progress to a healthier lifestyle. The proposed system recommends advice for the health metrics as per the value and user can set the custom goal set. It's also include appointment reminder and drug information for the user.

Keywords: BMI, health checker, track progress.

HEALTH MONITORING SYSTEM USING IOT

Anusuya.S - II MCA PG Student Department of Computer Applications
E.G.S. Pillay Engineering College, Nagpattinam
Email: anusuyasenthil2003@gmail.com

ABSTRACT:

This presentation examines how Internet of Things (IoT) technologies are reshaping healthcare by enabling real-time patient monitoring, enhancing chronic disease management, and improving hospital operations. IoT facilitates continuous data collection and personalized care through interconnected devices, offering significant

benefits in patient outcomes and operational efficiency. challenges such as data security, interoperability, and high costs remain. We will explore these issues, emerging trends like AI integration and wearable tech, and future directions for IoT in healthcare, supported by case studies demonstrating its impact.

Keywords: IOT, data collection, security, interoperability.

REAL-TIME DATA PROCESSING WITH CLOUD DATABASES: TECHNOLOGIES AND TECHNIQUES

Ishwarya.G – II MCA PG Student Department of Computer Applications

E.G.S. Pillay Engineering College, Nagpattinam

Email: ishwaryagobi2403@gmail.com

ABSTRACT:

This paper explores real-time data processing using cloud databases, highlighting key technologies and techniques. It covers stream processing frameworks like Apache Kafka and Amazon Kinesis, which facilitate the handling of continuous data streams. The discussion includes architectural patterns, such as event-driven designs and in-memory databases, that support real-time analytics. Challenges related to latency, data consistency, and fault tolerance are examined, along with strategies to address these issues. The paper also presents real-world use cases from various industries and forecasts future trends in real-time data processing technologies. It provides a thorough overview for professionals interested in leveraging cloud databases for real-time analytics.

Keywords: Apache Kafka, Amazon Kinesis, latency, data consistency.

OVERVIEW OF END-TO-END ENCRYPTION IN TEXT APPS

Juwairiyya. V.M – II MCA PG Student Department of Computer Applications

E.G.S. Pillay Engineering College, Nagpattinam

Email: juwairiyyavm@gmail.com

ABSTRACT:

As instant messaging (IM) and voice over IP (VoIP) apps such as WhatsApp, Zoom and Skype dominate communications, significant privacy and data security concerns have emerged. End-to-end encryption (E2EE) is essential for protecting user conversations, but it presents challenges for governments trying to combat terrorism and organized crime. This article reviews the existing literature on popular E2EE applications, highlighting their vulnerabilities, particularly to man-in-the-middle (MitM) attacks and faulty authentication processes. While governments protect the "backdoor" to access encrypted messages for reasons of national security, users worry about privacy violations and potential abuse. Current E2EE systems, often managed by service providers, undermine user trust by storing decryption keys. To address these issues, we propose a blockchain-based E2EE framework that allows users to control their own encryption keys more securely. This approach aims to improve communication privacy and security by contributing to the debate about the balance between user privacy and public security.

BLOCKCHAIN IN HEALTHCARE

Kavimozhi.K - II MCA PG Student Department of Computer Applications

E.G.S. Pillay Engineering Colelge, Nagpattinam

ABSTRACT

As instant messaging (IM) and voice over IP (VoIP) apps such as WhatsApp, Zoom and Skype dominate communications, significant privacy and data security concerns have emerged. End-to-end encryption (E2EE) is essential for protecting user conversations, but it presents challenges for governments trying to combat terrorism and organized crime. This article reviews the existing literature on popular E2EE applications, highlighting their vulnerabilities, particularly to man-in-the-middle (MitM) attacks and faulty authentication processes. While governments protect the "backdoor" to access encrypted messages for reasons of national security, users worry about privacy violations and potential abuse. Current E2EE systems, often managed by service providers, undermine user

trust by storing decryption keys. To address these issues, we propose a blockchain-based E2EE framework that allows users to control their own encryption keys more securely. This approach aims to improve communication privacy and security by contributing to the debate about the balance between user privacy and public security.

ARTIFICIAL INTELLIGENCE IN EDUCATION

Kowsalya.D - II MCA PG Student Department of Computer Applications
E.G.S. Pillay Engineering College, Nagpattinam

ABSTRACT

Information and communication technologies (ICT), e-learning, mobile learning hypermedia have considerably improved education, but today artificial intelligence offers us a variety of possibilities that we were previously unaware of and leading us to a new revolution known as Education 4.0. This article presents a literature review of journal and research articles in artificial intelligence in the field of education (AIEd) published between 2019 and 2021 on the scientific database ScienceDirect. Through a bibliometric selection based on selective criteria, we were able to highlight the most requested AIEd technologies and their applications. We also talked about real-world examples of how AIEd tools can be used in many educational contexts and disciplines. This research can serve as a starting point for future research to be aware of trends in AIEd applications and future directions.

OVERVIEW OF MOBILE BASED FOOD ORDERING APPLICATION USING UI/UX

Dhakshanya. M. K – II MCA

PG Student Department of Computer Applications
E.G.S. Pillay Engineering College, Nagpattinam

ABSTRACT

This research aims to design a mobile-based food ordering application using design thinking modeling and the System Usability Scale (SUS) approach. The goal is to enhance user experience and efficiency. The User Centered Design method is used to obtain descriptive information for the User Interface and User Experience design guidelines, while the User Experience Questionnaire method assesses the evaluated outputs. The final design is based on the end comparison result of the User Experience Questionnaire. E-commerce is a key area of web services, with businesses investing in it for quick delivery and practical online experiences. The prototype system will allow customers to easily order and pay for their favorite food and the app provides a user-friendly interface, notifications to distributors, and features like a history of past orders and easy reordering. The prototype will be developed using FIGMA, FIGJAM and Adobe Photoshop for design enhancement.

EVALUATION OF MOBILE APPLICATION

Vishnu. V – II MCA PG Student Department of Computer Applications
E.G.S. Pillay Engineering College, Nagpattinam

ABSTRACT:

Mobile applications have become indispensable tools across various sectors, including communication, finance, healthcare, and education. However, the increasing complexity and functionality of mobile apps require a robust evaluation framework that can ensure their usability, performance, and security. Existing evaluation methods often focus on individual aspects of app functionality, overlooking the holistic view of user experience and system performance. This paper examines the limitations of current evaluation techniques and proposes a comprehensive multi-dimensional evaluation framework. The framework integrates usability testing, performance analysis, security assessments, and cross-platform compatibility, aiming to improve the overall quality of mobile applications.

WIRELESS NETWORK HACKING: TECHNIQUES, TOOLS, AND PREVENTION

Vinisha. S– II MCA PG Student Department of Computer Applications
E.G.S. Pillay Engineering College, Nagpattinam

ABSTRACT:

Wireless networks have transformed the way we connect to the internet, offering convenience and mobility. However, they have also introduced new vulnerabilities that hackers can exploit. This article delves into the various hacking techniques used to target wireless networks, the tools employed by cybercriminals, and the essential strategies that can be used to secure these networks. By understanding these elements, individuals and organizations can fortify their defenses and prevent unauthorized access to sensitive data.

OVERVIEW OF INCREMENTAL MODEL IN SOFTWARE ENGINEERING

Nithish. V– II MCA PG Student Department of Computer Applications

E.G.S. Pillay Engineering College, Nagpattinam

ABSTRACT:

This study introduces an incremental model concept, which involves a two-phase development process. The first phase involves building a standard regression model, which forms the backbone of the entire construct. The second phase compensates for modeling discrepancies by attaching rules to the regions of the input space where the error is localized. The incremental model is constructed through context-based fuzzy C-means, guided by the distribution of error in the linear part of the model. The paper also explores how software designers can build complex software design models incrementally by exploiting model interfaces and information hiding. The authors discuss how incremental modelling fits with software development processes and show how different model composition techniques support the incremental extension and customization of models.

CYBER SECURITY IN 2024: TRENDS, THREATS, AND BEST PRACTICES

Saipreethi. V– II MCA PG Student Department of Computer Applications

E.G.S. Pillay Engineering College, Nagpattinam

ABSTRACT:

As we enter 2024, the landscape of cybersecurity is rapidly evolving in response to new technological advancements and emerging threats. This article examines the latest trends in cybersecurity, highlighting the increasing prevalence of artificial intelligence and machine learning in threat detection and response. It explores the rise of sophisticated cyberattacks, including ransomware, supply chain vulnerabilities, and phishing scams, which continue to challenge organisations globally. Additionally, the article emphasises the importance of adopting robust cybersecurity practices, such as zero trust architecture, regular security audits, and employee training programs. By understanding the current threats and implementing effective strategies, businesses and individuals can better protect their digital assets and mitigate risks in an increasingly interconnected world.

CLOUD DEPLOYMENT MODEL

Priyadharshini. S– II MCA PG Student Department of Computer Applications

E.G.S. Pillay Engineering College, Nagpattinam

ABSTRACT:

This cloud deployment model provides a scalable and secure framework for deploying applications and services in a cloud environment. The model utilizes a hybrid cloud approach, combining the benefits of public and private clouds to ensure flexibility, reliability, and cost-effectiveness. Key features include:

- Multi-layered security architecture
- Auto-scaling and load balancing
- Containerization and microservices support
- Continuous integration and delivery pipeline
- Real-time monitoring and logging

OVERVIEW OF POWER BI DASHBOARD

Anuradha. R– II MCA PG Student Department of Computer Applications

E.G.S. Pillay Engineering College, Nagpattinam

ABSTRACT:

Data from a variety of marketing channels, such as social media, online campaigns, and customer interaction metrics

are gathered by the marketing forecasting module for campaigns on customer acquisition, brand awareness, and lead generation by examining previous campaign performance and market trends. The process of understanding the value of a data set through a visual context is known as data visualization," and it is a component of data analytics that is carried out after data correction. These days, analytics and business intelligence are more dependent on visualization. An integrated Power BI dashboard to give projections, and future forecasting on sales, finance, marketing, and supply chain. The dashboard enables organizations to make data-driven choices and optimize resource allocation, and future growth opportunities by leveraging the power of data analytics and visualization. Users can explore data from various perspectives and dimensions using the intuitive visualizations, interactive charts, and drill-down features provided by the Power BI dashboard.

MACHINE LEARNING IN HEALTH CARE

Siva Ranjani. J - II MCA PG Student Department of Computer Applications
E.G.S. Pillay Engineering College, Nagpattinam

ABSTRACT:

Machine Learning (ML) is becoming very important in healthcare because it uses big data and advanced computers to improve medical care. Supervised ML can predict outcomes, like whether a patient will develop a disease, using different methods such as linear regression and decision trees. Unsupervised ML looks for patterns in data, like finding unusual activities in health records. ML is already helping doctors make better decisions and identify groups of people who are at risk of certain diseases, so public health actions can focus on them.

Recent improvements in Artificial Intelligence (AI) and ML are helping predict health emergencies, track diseases, and understand how treatments work. These tools are being used in areas like radiology and genetics. While there are some concerns about privacy and ethics, the use of ML in healthcare is growing quickly. It is important to include ML in medical education, so doctors can better understand and use these tools in their work.



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