International Journal Of Advance Research, Ideas And Innovations In Technology

VOLUME 10 - ISSUE 1

IJARIIT

SPECTRUM

International Journal of Advance Research, Ideas and Innovations in Technology

January-February, 2024

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Spectrum is an e-magazine with the comprehensive collection of all the papers that have been published in our journal over the last two months — Volume 10, Issue 1 (January-February, 2024). This edition brings together 83 papers by 211 authors from 80 institutions. Each entry links to the abstract and the full paper.

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ABSTRACTS

1 Advancements in Artificial Intelligence: Impacts on Society and Ethics

Paper ID V10I1-1139 · Pages 1-5 · Computer Engineering

Dhanashree Kolhe, Student, K.J. Somaiya Polytechnic, Mumbai, Maharashtra
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This research paper delves into the intricate interplay between Artificial Intelligence (AI) and computer engineering, exploring its historical roots, current state, societal impacts, ethical considerations, regulatory frameworks, and future prospects. From tracing the evolution of AI in computer engineering to anticipating future technological advancements, the narrative unfolds within the broader context of societal transformation. The examination of ethical dimensions and regulatory challenges underscores the need for responsible development and governance. As AI becomes increasingly integrated into computer engineering, this research aims to provide a comprehensive understanding of its multifaceted impacts and guide a thoughtful approach to navigating the evolving landscape. This research paper delves into the intricate interplay between Artificial Intelligence (AI) and computer engineering, exploring its historical roots, current state, societal impacts, ethical considerations, regulatory frameworks, and future prospects. From tracing the evolution of AI in computer engineering to anticipating future technological advancements, the narrative unfolds within the broader context of societal transformation. The examination of ethical dimensions and regulatory challenges underscores the need for responsible development and governance. As AI becomes increasingly integrated into computer engineering, this research aims to provide a comprehensive understanding of its multifaceted impacts and guide a thoughtful approach to navigating the evolving landscape. This research paper delves into the intricate interplay between Artificial Intelligence (AI) and computer engineering, exploring its historical roots, current state, societal impacts, ethical considerations, regulatory frameworks, and future prospects. From tracing the evolution of AI in computer engineering to anticipating future technological advancements, the narrative unfolds within the broader context of societal transformation. The examination of ethical dimensions and regulatory challenges underscores the need for responsible development and governance. As AI becomes increasingly integrated into computer engineering, this research aims to provide a comprehensive understanding of its multifaceted impacts and guide a thoughtful approach to navigating the evolving landscape.

Keywords: Artificial Intelligence, Computer Engineering, Historical Context, Ethical Considerations, Societal Impacts, Regulatory Frameworks, Future Perspectives, Technological Advancements, Human-Machine Collaboration, and Responsible AI.

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2 The Crucial Role of Programming Languages in Today’s World

Paper ID V10I1-1141 · Pages 6-9 · Computer Engineering

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The research paper explores the evolution and crucial role of programming languages in shaping the digital era, emphasizing their significance in diverse fields such as technology, education, innovation, and global connectivity. Additionally, it delves into the current trends in programming languages, with a focus on Python and JavaScript, and highlights the importance of mobile application testing in ensuring a seamless user experience. The conclusion underscores the integral role of programming languages in our technologically-driven society.

Keywords: Programming, Technology, Mobile, Applications, Digital, Transformation

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3 Harmonizing Intelligence: An Overture to the Symphony of Artificial Intelligence

Paper ID V10I1-1149 · Pages 10-14 · Artificial Intelligence

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This comprehensive research paper undertakes a thorough examination of the multifaceted landscape of Artificial Intelligence (AI), encapsulating its historical evolution, contemporary developments, and prospective trajectories. Rooted in a rich historical context, the paper navigates through the seminal moments of AI inception, the contributions of key figures, and the paradigm shifts that have shaped its trajectory. Moving beyond historical insights, the study delves deep into the theoretical foundations of AI, encompassing machine learning, natural language processing, computer vision, and ethical considerations. The exploration of cutting-edge models, interdisciplinary collaborations, and real-world applications underscores the transformative influence of AI across diverse domains.

Keywords: Artificial Intelligence, Future, History, Present Time

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4 Green Initiative Low-Cost Solar Electric Vehicle

Paper ID V10I1-1143 · Pages 15-20 · Solar Electric Vehicle

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Renewable energy is a type of energy that may be produced from a variety of resources, including sunlight, wind, tides, geothermal, etc. It delivers sustainable, clean energy that is derived from renewable natural resources. More renewable energy will be used, which will reduce the cost and demand for fossil fuels. The main uses of solar photovoltaic energy are for power generation, heating, and other things. The development of solar-powered cars was made possible by recent breakthroughs. This study discusses the design and development of a charge controller-based solar charging system for electric automobiles. The suggested system's implementation will lower the price of power and charging and discharging losses. Also, this is one of the steps taken to create a green campus by proposing a solar charging system. This paper will show how to create a solar-powered electrical vehicle system and analyze its performance.

Keywords: EV Charging, Electric Vehicle, Solar PV Array, Maximum Power Point Tracker (MPPT), Renewable Energy.

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5 Semiconductor

Paper ID V10I1-1148 · Pages 21-22 · Computer Science

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Semiconductors, with their unique ability to manipulate electrical conductivity, have become the cornerstone of the technological revolution sweeping across the globe. This research paper delves deep into the world of these extraordinary materials, exploring their fundamental properties, diverse applications, and the frontiers of research pushing the boundaries of what's possible. From the ubiquitous transistors powering our smartphones to the solar panels capturing the sun's energy, semiconductors have woven themselves into the very fabric of our lives. This voyage of discovery aims to illuminate the enigmatic nature of these materials, their impact on the present, and their potential to shape the future.

Keywords: Semiconductor, Conductivity, Crystal Diode

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6 Plastic Based Road

Paper ID V10I1-1160 · Pages 23-26 · Engineering

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Plastic-based roads, a transformative concept introduced by Rajagopalan Vasudevan, are reshaping sustainable infrastructure globally. With countries like Australia, Indonesia, India, the UK, and the US actively exploring this eco-friendly innovation, the widespread interest reflects a commitment to recycling post-consumer plastics. Notably, the Netherlands' Plastic Road initiative pioneers bicycle paths constructed from prefabricated, hollow, modular elements made from consumer plastic waste. These roads feature innovative hollow spaces that serve as rainwater reservoirs, showcasing a thoughtful approach to sustainable water management. As a 3rd-year diploma student, my active participation in hands-on demonstrations underscores the practical application of plastic-based road construction. The methodology involves collecting, cleaning, and blending plastic waste with bitumen, resulting in a mix laid similarly to traditional asphalt concrete. Plastic roads offer reduced carbon footprints and contribute to diverting plastic waste from landfills, aligning with environmental sustainability goals. Construction methods vary globally, with unique plastic-asphalt blends adopted in countries like India and Indonesia. Ongoing monitoring and maintenance are crucial for ensuring the sustained performance of plastic-based roads, marking a significant stride towards eco-conscious transportation networks. In essence, plastic-based roads represent an innovative and environmentally responsible approach to constructing resilient and eco-friendly infrastructure.

Keywords: Plastic-Based Road, Eco-conscious, Sustainable Infrastructure

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7 An academic analysis of the inappropriate usage of adverbs of manner and verbs by Turkish learners in translating texts from Turkish to English

Paper ID V10I1-1156 · Pages 27-29 · Language

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This scholarly article examines the challenges encountered by first grade Turkish college students when translating Turkish to English texts, with a particular emphasis on their improper use of manner adverbs and verbs. The study reveals that the placement of adverbs and verbs in English and Turkish differs, making it difficult for students to do translation between these languages The research investigates the precise grammatical errors identified in the translations produced by the students. It provides examples of improper placement of manner adverbs and verbs in English sentences. Examples of word order problems illustrate the difficulty that Turkish students encounter when attempting to learn English syntax. The research also demonstrates the impact of syntactical transfer on manner adverbs and verbs, thereby highlighting the extent

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to which students rely on Turkish word order patterns. A thorough understanding of similarities and differences between Turkish and English is crucial for accurate translation, according to the study. The study suggests that by concentrating language instruction on minor distinctions in syntax, students may be able to achieve a higher rate of accuracy when translating Turkish texts into English. The research concludes by emphasizing the criticality of instructing Turkish students in English on both the similarities and differences in syntax so that they may acquire the necessary proficiency to translate.

Keywords: Syntactic Differences, Translation, Negative Transfer, Word Order

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8 Reshaping business models: a study on management consulting's role in industry's adaptation to the new normal

Paper ID V10I1-1167 · Pages 30-38 · Industry And Business

Aastha Pundhir, Insight Business Consultants, New Delhi, Delhi

This research study examines the role of management consulting in the adaptation of the economy to the new normal, providing a comprehensive account of its initial challenges and subsequent adjustments. This research investigates the crisis responses of consulting firms as well as the information integration and supply chain management of enterprises. The capacity of enterprises to surmount adversity was pivotal to their expansion. Firms have exhibited remarkable flexibility in the face of the crisis through the implementation of digital technologies. Innovative office solutions were developed, work patterns were restructured, and work-from-home models were adopted; these developments altered conventional business operations. Every one of these three elements had an impact on the revolution. It commences with a comprehensive analysis of the primary business models for online consulting. It advises business owners on the initiation and promotion of an internet consulting firm, an industry that is expanding rapidly. In addition, Gartner workplace trends that may impact consulting opportunities in the aftermath of the pandemic are discussed. A comprehensive analysis of these themes is provided in the report. Credible online platforms, academic databases, industry publications, and internal business papers were utilized in the analysis. Region-by-region distribution highlights the study's influence on consulting in North America and its anticipated recovery. In addition to management consulting, the study investigates additional consulting subsectors. The concluding segment underscores the criticality of digital transformation for consulting firms and the necessity for them to possess up-to-date capabilities in order to assist clients in adapting to an unforeseeable business environment. This research illuminates the strategies employed to surmount unforeseen challenges and offers a comprehensive comprehension of how forward-thinking organizations managed to persist and prosper in the face of such impediments.

Keywords: COVID-19 Impact, Online Consulting, Digital Transformation, Corporate Strategy, Management Consulting, Industry Recovery, Future Trends, Startups, Resilience, Ed-Tech, Online Grocery, Health Tech, Fintech, Government Initiatives, Work-From-Home, Funding Resilience, Paradigm Shift

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9 Lossy and lossless data compression algorithms – a comparative study

Paper ID V10I1-1163 · Pages 39-43 · Computer

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This research introduces the lossless and lossy compression algorithms in detail, compares their types on basis of strengths, weaknesses, and applications. The study focuses on exploring lossless and lossy compression methods, their compression ratios, complexities, and suitability for diverse data types and applications.

Keywords: History of Data Compression, Importance, Types of Algorithms and their comparative study, Pros & Cons of Data Compression, Decompression, Applications and Future Directions.

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10 Utilization of ferrocement to rural sanitation

Paper ID V10I1-1172 · Pages 44-49 · Engineering

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Engineering is the application of technology for the benefit of society, and it encompasses various fields based on specific areas of application. Civil engineering, in particular, plays a crucial role in the construction and maintenance of infrastructure such as roads, bridges, dams, canals, and buildings. This project focuses on the utilization of civil engineering principles for the "Application of Ferrocement Technique to the Rural Sanitary Block System." The escalating costs of basic building materials like steel, sand, cement, brick, timber, and labor have led to a continuous rise in construction expenses. Conventional building materials and construction techniques are becoming less economical, especially for low and middle-income groups. Therefore, there is an urgent need to explore cost-effective construction techniques, either by upgrading conventional methods or by introducing innovative approaches. Ferrocement panels, the key focus of this project, offer a practical solution. These panels are easy to cast, cure, and manually erect on-site. The roofing system developed through ferrocement technology provides strength and rigidity, making it a cost-effective alternative. This makes it particularly well-suited for prefabricated construction, especially beneficial for people residing in rural areas. In essence, this project aims to leverage civil engineering principles to address the economic challenges associated with construction. By introducing ferrocement techniques, it seeks to provide a viable and cost-effective solution that can benefit not only low-income populations but also middle-income groups, contributing to sustainable and affordable construction practices in the realm of rural sanitation.

Keywords: Ferrocement Technology, Rural Sanitation, Construction Techniques, Prefabricated Construction

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11 Hydropower/hydroelectricity dam

Paper ID V10I1-1162 · Pages 50-54 · Engineering

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Hydropower, also known as hydroelectricity, denotes the process of converting mechanical energy derived from the movement of flowing water into electrical energy. This phenomenon is intricately connected to the natural water cycle, a perpetual sequence facilitated by the sun's energy. The renewable nature of hydropower stems from the continuous replenishment of the water cycle, ensuring a sustained and dependable energy source. Typically, hydroelectric power plants incorporate essential components such as a water reservoir, a gate or valve for regulating water discharge from the reservoir, and an outlet directing the water post-descent. The elevation of water, notably just prior to cascading over a dam or descending downhill, results in the accumulation of potential energy. Subsequently, this potential energy undergoes conversion into kinetic energy as the water descends, ultimately contributing to the rotation of turbine blades. The kinetic energy harnessed from the flowing water is then utilized to generate electricity, a process integral to the overall functionality of the hydroelectric power plant. The resultant electrical power is subsequently distributed to the plant's consumer base, thereby exemplifying the effectiveness and sustainability of hydropower as a vital component within the renewable energy landscape.

Keywords: Hydropower, Hydroelectricity, Mechanical Energy, Flowing Water, Electrical Energy 1. INT

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12 Light weight bricks using sludge

Paper ID V10I1-1159 · Pages 55-58 · Engineering

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Waste may be defined as an unwanted material generated after the manufacturing process from industry, agriculture, or household activity. Waste causes many nuisances in the environment. It produces many types of infection, for humans and animals. The sludge from tannery effluent plants has the problem of disposal. Dewatered sludge is disposed of by landfilling. However, it is not an appropriate solution, due to the land limitation. The production of sludge in tannery effluent plants is about to increase every year. In addition, the constraint to treat sludge is very high in cost and time-consuming, which is a disadvantage to the responsible parties. Therefore, this study was carried out to utilize the sludge waste (SW) produced from the tannery effluent plant as a brick. The sludge brick (SB) mixtures were incorporated with many ratios of SW. Tests were

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conducted such as fineness test, specific gravity, water absorption, and compressive strength. In conclusion, brick with 20% utilization of SW is acceptable to produce good quality brick. This study shows that the disposal of tannery sludge TSW would act as a suitable material for manufacturing bricks with proportionate mix and design.

Keywords: Sludge, Tannery Effluent

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13 Estimation and Designing of Airport

Paper ID V10I1-1161 · Pages 59-61 · Engineering

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Analysis of the dynamics of evolution of multi-airport systems worldwide that can help to guide their effective development in the future. Given the capacity constraints on existing major airports, the development of multi-airport systems is going to be a key mechanism by which air transportation systems around the world will be able to meet future demand. In order to better understand how these systems will evolve, a systematic case study analysis of 59 airport systems worldwide was performed. The analysis showed significant differences in the evolution of multi-airport systems across world regions. In the United States and in Europe, the recent development of multi-airport systems primarily involved the emergence of secondary airports. In Asia, multi-airport systems have generally evolved through the construction of new high capacity airports, due to a much weaker set of available airports, high perceived benefits of strong growth of traffic and weaker opposition to the construction of airports. Given the capacity constraints on existing major airports and the limited ability to increase their capacity, the transition and development of multi-airport systems appears to be key mechanism by which air transportation systems around the world will be able to meet future demand.

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

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14 Training a transformer-based model with Chinese dataset for sentence completion task

Paper ID V10I1-1176 · Pages 62-69 · Computer Science

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This paper presents the development and training of a transformer-based model using a Chinese news dataset and Chinese short stories for the task of sentence completion. The transformer model has shown remarkable success in natural language processing tasks, and this study aims to leverage its power to improve sentence completion accuracy in the Chinese language. The Chinese news dataset utilized in this research encompasses a wide range of topics, providing the model with comprehensive domain knowledge. Experimental results

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demonstrate the effectiveness of the transformer model on the sentence completion task in Chinese. All Codes, models, and the dataset are available at https://github.com/zhaaaos/chinese_sentence_completion

Keywords: NLP, Transformers, Sentence Completion

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15 Patents vs Public Health: The Case of Pharma Companies

Paper ID V10I1-1151 · Pages 70-73 · Pharmaceutical Companies

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How do copyright laws and digital media patents intersect and interact in the protection of intellectual property in the modern age, and what are the implications for innovators, and consumers?

Keywords: Patent, Roche vs. Cipla, Bayer Corporation vs. Natco Pharma, Moderna vs. Pfizer Biontech

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16 Self compacting concrete

Paper ID V10I1-1173 · Pages 70-73 · Engineering

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Self-compacting concrete (SCC) is a remarkable innovation in the field of construction materials. It represents a paradigm shift in the way concrete is designed and placed. This abstract provides an overview of self-compacting concrete, highlighting its properties, advantages, and applications. Self-compacting concrete is characterized by its unique ability to flow and fill intricate formwork under its own weight, without the need for external vibration. This remarkable property is achieved through a well-balanced mix design, incorporating high-flow ability materials, super plasticizers, and viscosity-modifying agents. SCC offers several significant advantages, including improved workability, reduced labor and equipment costs, enhanced structural integrity, and minimized environmental impact.

Keywords: Self Compacting Concrete,Highlights

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17 The Impact of Stress and Anxiety on Indian Teenagers: Causes, Consequences, and Coping Strategies

Paper ID V10I1-1174 · Pages 74-77 · Psychology

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The escalating prevalence of stress and anxiety among Indian teenagers poses a significant challenge to their mental health. This research delves into the intricate facets of stress and anxiety in this demographic, aiming to identify contributing factors, explore long-term impacts, and examine effective coping strategies. A structured survey, administered through Google Forms, involved 243 participants aged 13 to 19 from diverse schools in India. Academic pressure emerged as the most common stressor, followed by social media, peer pressure, family conflicts, and personal expectations. Consequences encompassed negative impacts on mood, physical symptoms, and impaired academic performance. Coping strategies identified include exercise, mindfulness, social support, and journaling. Despite limitations, the study emphasizes the importance of addressing academic pressure, family dynamics, and social factors to support teenagers effectively.

Keywords: Stress. Anxiety, Indian Teenagers

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18 Natural Filtration: How Soil Acts as a Cleansing Agent for Wastewater

Paper ID V10I1-1177 · Pages 78-82 · Civil Engineering

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Due to the unprecedented urban expansion, there has been an alarming surge in the demand for water, leading to an unsustainable depletion of groundwater resources. The accelerated rate at which these resources are tapped has outpaced any efforts for adequate replenishment, endangering the very foundation of our water supply. It is imperative that we not only safeguard existing water reservoirs but also explore alternative strategies to augment them. The responsible management and preservation of water resources are paramount for securing the future of our communities. As a result of this critical water scarcity, the concept of reusing water has emerged as an indispensable solution. One viable option involves harnessing treated wastewater effluents. Rapid urbanization has given rise to substantial sewage generation, contributing significantly to the contamination of water, soil, and air when discharged indiscriminately. To mitigate this environmental crisis, sewage must undergo treatment in dedicated facilities, yielding substantial quantities of effluents. The challenge at hand is to transform these effluents, which not only go to waste but also pose environmental threats, into a purified and reusable form. The pivotal question arises: how can the effluents from sewage treatment plants be efficiently converted into pristine water? Soil, a ubiquitous and cost-effective resource, emerges as a formidable solution. Renowned for its prowess as a physical, chemical, and biological filter, soil possesses the unique capability to act as a natural cleanser of water. The pressing national issue of water scarcity demands an innovative approach, and utilizing soil to transform sewage effluents into a valuable water source stands as a formidable task that requires our immediate attention and commitment.

Keywords: Filtration, Sedimentation, Biological, Oxidation, Denitrification, Degradation, Microorganisms, Passivation, Decomposition.

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19 The Impact of Artificial Intelligence on Design Engineering

Paper ID V10I1-1178 · Pages 83-93 · Design Engineering

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The purpose of this research paper is to evaluate the role of artificial intelligence in the field of design engineering by discussing the contribution of artificial intelligence to the field of design engineering. This research paper further examines whether using artificial intelligence can be advantageous or disadvantageous to design engineers and to relevant stakeholders, by critiquing it through secondary sources. This research paper analyzes the growth of artificial intelligence in various aspects related to design engineering and explains the reasons behind the same, using primary sources.

Keywords: Design Engineering, Artificial Intelligence

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20 Lightweight concrete

Paper ID V10I1-1180 · Pages 94-98 · Civil Engineering

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Lightweight concrete (LWC) boasts a rich history dating back to ancient Roman times and has gained popularity due to its lower density and superior thermal insulation properties. In comparison to normal-weight concrete (NWC), LWC significantly reduces the dead load of structural elements, making it particularly appealing in multi-story buildings. While most studies on LWC focus on "semi-lightweight" concretes, which use lightweight coarse aggregate and natural sand, there is potential for even greater environmental and economic benefits if waste materials replace the fine lightweight aggregate. With a history spanning over two millennia, the technical development of lightweight concrete continues to progress. This review begins with a retrospective, providing an overview of the diverse applications covered by lightweight concrete in the last century. Despite its proven technical potential, there are still hesitations and uncertainties in practice. To address this, the review delves into lightweight aggregate properties and various types of lightweight concrete, placing a special emphasis on current standards. Drawing from 25 years of practical and theoretical experience in the field, the review highlights the need for adaptations in design, production, and execution rules when working with lightweight concrete, which often deviate from those applied to normal weight concrete. Certain aspects prone to misunderstandings, such as nomenclature and the informational value of specific tests, are explored. The review addresses frequently occurring problems related to the mix design and production of lightweight concrete, elucidating unintended consequences. Additionally, a critical examination is provided of information found in existing European concrete standards regarding the mechanical properties of structural lightweight

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concrete. The review concludes by presenting the latest stage of development in very light lightweight concretes. Introducing Infra-lightweight concrete as an innovative approach, it aims to further extend the applications of lightweight concrete. This section provides background knowledge and experiences from case records, shedding light on an exciting frontier in the evolution of lightweight concrete.

Keywords: Expanded Clay Aggregate, Silica Fume, Poly Vinyl Alcohol (PVA), Density, Compressive Strength, Flexural Strength.

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21 A case study on Lyapunov stability analysis of nonlinear systems with ordinary differential equations

Paper ID V10I1-1171 · Pages 99-108 · Control System

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The main concern of this paper is the stability analysis of nonlinear systems. For evaluating the stability of a system around an equilibrium point, firstly need to understand the basic concepts of stability theory and then explore different methods to apply on the systems to check and verify the required conditions for it. This work emphasizes on the conditions needed to guarantee asymptotic stability in nonlinear dynamic autonomous systems of continuous-time.

Keywords: Nonlinear ODE, Energy, Lyapunov Function, Asymptotic Stability

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22 Synthetic fuels : The future of Gasoline Cars

Paper ID V10I1-1189 · Pages 109-111 · Chemical Engineering

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Alternative sources of fuel have increasingly attracted attention in the context of an energy crisis. The liquid and gaseous fuel types are created in several steps using carbon-based feedstock such as coal bituminous, lignin, coal, wood waste, biomass, shale bitumen, etc. These could serve as alternatives for normal fossil fuels used for transportation and many others. Synthetic fuels have higher efficiencies, lower carbon footprints, and fit within existing systems, making them a good option in shifting towards cleaner energy systems. Assessment of the economic impact on a large-scale of synthetic fuel production and utilization is important due to its impact on the environment. This should involve taking into consideration aspects like cost-effectiveness, the demand for the products in that particular market, and the role played by the government through incentives or regulations. For an adequate characterization of this developing field, current state-of-the-art attempts towards improving synthetic fuel technologies and breakthroughs should be understood. Synthetic fuels have been promising substitutes for traditional fossil fuels, although their exploitation should not lose its momentum.

Keywords: Synthetic Fuels, Gasoline Cars

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23 Absolute time, time dilation and three dimensions with pyramid model of universe through theory of stability and law of universal neutrality

Paper ID V10I1-1186 · Pages 112-120 · Astrophysics

Mithun S. Gowardhan, Independent Researcher, Independent Researcher

The science and technology with every fraction of time heading the humankind towards the future with a great speed but can this speed will make us to travel with the speed of light and will possibly allow us to enter the future before time allows it? Continuing to my previous article on origin of universe and life with the theory of stability and law of universal neutrality I wanted to explain the laws of universe with the impact of absolute time which i believe is the 3rd dimension as well as the most fundamental law of our universe which constantly restrict the possibility of time travel to our past and the future. The mystery of time travel to past or future might get left behind if we understand that the time is absolute. I have tried to fill the gap between the quantum mechanics and the classical physics with the fundamental forces (ISF & OSF) and laws of universal neutrality and the theory of stability. I believe the details in this article provide the reasonable outputs to many mysterious questions of all time. With the help of this article and its all proposed laws will make it easier for science and mankind to understand the fundamental laws of this universe and also to be more close to our universe.

Keywords: Fundamental Forces, Absolute Time, Time Travel, 3 Fundamental Dimensions, Pyramid-Model Of Universe, Golden Ratio, Inertia.

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24 Role of technology in finding planned defaulters

Paper ID V10I1-1192 · Pages 121-131 · Economics

Ananya Bhatnagar, Student, Amity Pushp Vihar, New Delhi, Delhi

The paper focuses on the role of technology in finding planned defaulters. With the fast-paced advent of financial technology, it is imperative that technology plays a key role in enhancing customer experience esp. around security and preventing default. The paper identifies the role of technology in identifying planned defaulters and how it can be adapted and used to prevent such mishaps from happening in the future. A quantitative survey has been undertaken, which shows fast adoption of fintech solutions by Merchants/small-scale businesses. The survey also highlights the concern of risk associated with fraud and how well the Merchants can adapt to tech solutions to prevent such incidents, thereby enabling technology to play a firm role in identifying planned defaulters. The paper summarizes current methods used to find planned defaulters by fintech companies and what should be done further in this area. The paper also lays out the future scope of research work.

Keywords: Technology, Debt, Planned Defaulters

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25 IOT Based Home Security Smart System Using Arduino

Paper ID V10I1-1184 · Pages 132-137 · Electronics Engineering

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Rapid advances in technology have led to increased interest in home security systems designed to improve the security and protection of residential properties. This research paper provides a comprehensive study on the design, development and implementation of a home alarm system using Arduino. The system uses an array of sensors and an Arduino microcontroller to detect potential intruders and instantly trigger the alarm. This study demonstrates effectiveness, reliability, and economy, making it useful for home security applications. This article presents the design and implementation of a home alarm using Arduino as an IoT application. The Internet connection module for this system connects to the central power supply of the home network that can be accessed from the Internet. Use a static IP address for wireless connections. Home automation relies on a variety of applications that can be run using Google Assistant or voice recognition commands in the user's web application. Therefore, the main goal of this paper is to model our home automation safer and smarter.

Keywords: Blynk Application, MQ-2 Gas sensor, PIR Sensor, Arduino, IoT.

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26 Semiconductors and Cosmetics

Paper ID V10I1-1193 · Pages 138-146 · Semiconductors And Cosmetics

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This review investigates the various applications of silver nanoparticles (AgNPs) in cosmetics and semiconductors, bridging the gap between these two diverse industries. It focuses on utilizing nanosilver in both industries, the paper explores how subtle alterations in nanoparticle properties and synthesis methods lead to profound shifts in behavior, allowing the same material to be employed in two extensively different sectors. Offering an up-to-date overview of ongoing activities in this field, the review expresses a shared interest in AgNPs, covering their origin, properties, and applications in the cosmetic and semiconductor industry. Additionally, it addresses the crucial aspect of AgNPs' toxicity, exploring its harmful implications for both human health and the environment. Furthermore, the review suggests new research ideas for combining cosmetics and semiconductors. By providing insights into the adaptability and implications of silver nanoparticles, this review serves as a valuable resource for researchers and professionals, offering scope for future explorations at the intersection of cosmetic and semiconductor technologies.

Keywords: Nanosilver Nanoparticles, Cosmetics, Semiconductors, Toxicity, Application In Electronics And Semiconductor

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27 How Open Data is Reshaping Supply Chains for Social Equity

Paper ID V10I1-1200 · Pages 147-155 · Supply Chain Management

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The supply chain is vital in achieving a conducive working environment for business stakeholders. Current developments in big data analytics technology create insights that help supply chain members achieve their objectives (Mol, 2015). The bottleneck of unsustainability in industries can be achieved when firms take corrective actions on challenges that members encounter while analyzing open data (Saeed & Kersten, 2019). A literature review is the method of investigation in the study. During the inquiry, 50 research articles were analyzed by researchers to get comprehensive results on the topic (Scott, 2020). The paper applies the Toulmin model of argumentation to elaborate on the link between big data analytics and supply chain management. Some components of big data analytics are integration, security, economics, reporting, analytics, and data processing. (Gardner et al., 2019). Researchers in the study have used different examples of supply chains to analyze and understand the relationship between transparency and sustainability in various supply chain categories (McDermott, 2014). Supply chain information enhances improvement in sustainability governance. In this paper, the researchers gathered information from the literature to get a comprehensive concept of sustainable supply chain management (Egels-Zandén & Hansson, 2016). A direct correlation between sustainability and supply chain through an open data management approach exists. Applying big data analytics by firms can lead to cost savings by reducing expenses that the company could have otherwise incurred in the health and safety of the workforce and members of society. The data should comply with quality for effective decision-making across the supply chain network (Brandenburg et al., 2019).

Keywords: Data Transparency, Open Data, Supply Chain Management, Decision-Making, Stakeholder Feedback, Risk Management, Data Collection Devices, Big Data Analytics, Economic Improvement, Disruption, Growth Trends

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28 A Comprehensive Study of Sign Language Recognition using Technology and AI

Paper ID V10I1-1198 · Pages 156-160 · Artificial Intelligence

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Sign language plays a crucial role in facilitating communication within the hearing-impaired community, yet it often poses a challenge as a communication barrier with the broader society. Recent technological and Artificial Intelligence (AI) advancements present an opportunity to bridge this communication gap effectively. This research delves into the essential components of developing a Sign Language Recognition system, exploring aspects such as sign-capturing techniques, selection of sign datasets, preprocessing methods, and integrating a deep learning module featuring both CNN and CNN-SVM modules.

Keywords: Sign Language Recognition, Deep Learning, CNN, CNN-SVN

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29 Ways to Enhance Airline Efficiency and Profitability

Paper ID V10I1-1202 · Pages 161-163 · Airtravel

Shlok Kapoor, Student, Heritage Xperiential Learning School, Nangli Umarpur, Haryana

This research investigates various strategies and innovations aimed at enhancing airline productivity. It explores how operational enhancements, technological advancements, and environmentally sustainable practices can mitigate costs, boost production, and minimize adverse environmental effects. The paper offers an overview of diverse approaches airlines can adopt to enhance their overall performance, drawing insights from case studies and industry trends.

Keywords: Air Travel, Economy , Budget

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30 The Origin and Development of Jatra Theatre in Odisha

Paper ID V10I1-1204 · Pages 164-166 · Performing Art

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The performance Tradition of Folk Theatre and Traditional Folk Theatre forms of Odisha is as old as our civilization. There are many forms of Folk Theatre and Traditional Folk Theatre in the cultural sphere of Odisha. Jatra is one of the most popular forms of folk theatre that originated and developed from the religious and spiritualistic base of the Bhakti Movement. Now it has become a highly commercialized form of Odia Folk Theatre. It is all about its origin and gradual development. Abstracts: The performance Tradition of Folk Theatre and Traditional Folk Theatre forms of Odisha is as old as our civilization. There are many forms of Folk Theatre and Traditional Folk Theatre in the cultural sphere of Odisha. Jatra is one of the most popular forms of folk theatre that originated and developed from the religious and spiritualistic base of the Bhakti Movement. Now it has become a highly commercialized form of Odia Folk Theatre. It is all about its origin and gradual development.

Keywords: Folk Theatre, Traditional Folk Theatre, Pravritti, Gita Govinda, Oudra, Khandagiri, Madhyama Bikrusta.

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31 The expansion theory (Oasis of opportunities)

Paper ID V10I1-1205 · Pages 167-168 · Innovation Technology

Antonio Lobusto, Independent Researcher

The Expansion Theory or also called "Oasis of opportunities" - states that for every problem (P) there is one or more corresponding solutions (Sn), more or less effective, such as to be able to nullify and/or neutralize that problem. Furthermore, for every effective solution submitted to that problem, there will be n Opportunities for people and/or communities of people.

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Keywords: Innovation, Technology, Progress, Expansion, Problem, Solution

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32 The Evolution of Boxing

Paper ID V10I1-1209 · Pages 169-170 · Sports History

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Boxing, as a combat sport, has been captivating audiences for centuries with its display of skill, power, and determination. Despite its popularity, boxing faces numerous challenges and controversies. This paper explores the evolution of boxing, from its ancient origins to its modern-day significance. It delves into the sport's rules, governing bodies, famous personalities, cultural impact, and the ethical issues it confronts. By examining these facets, we gain insight into boxing's enduring appeal and its potential future directions.

Keywords: Boxing, Combat Sport, Evolution, Rules, Governing Bodies, Famous Boxers, Cultural Impact, Challenges, Controversies, Future Directions.

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33 The Transformative Impact of Artificial Intelligence on Employment: Opportunities, Challenges, and Solutions in the Global Landscape

Paper ID V10I1-1212 · Pages 171-173 · Ai

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This research paper delves into the current and future implications of Artificial Intelligence (AI) on employment, exploring its effects on job creation, transformation, challenges, and potential solutions. It examines the evolving landscape of employment in the context of AI, including the creation of new job opportunities, transformation of existing roles, societal implications, human-AI collaboration, ethical considerations, future skills, and education requirements. The paper underscores the importance of inclusive policies, lifelong learning, and global cooperation to navigate the complex interplay between AI and the labor market.

Keywords: Artificial Intelligence (AI), Employment Labor Market Job Transformation Ethical Considerations

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34 Dihydrofolate Reductase (DHFR): A Versatile Protein with Crucial Roles in Life and Disease

Paper ID V10I1-1208 · Pages 174-177 · Biotechnology

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Dr. Rajesh Jorgewad, Assistant Professor, Kolhapur Institute of Technology's College of Engineering (Autonomous), Kolhapur, Maharashtra
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Dihydrofolate reductase (DHFR), a ubiquitous oxidoreductase, occupies a pivotal position in folate metabolism. This review presents a comprehensive analysis of DHFR's structure, catalytic mechanism, and diverse physiological roles. We highlight its essential function in purine and thymidylate biosynthesis, emphasizing its impact on DNA replication and cell proliferation. The review further explores the multifaceted implications of DHFR in disease: its exploitation in cancer chemotherapy through targeted inhibition, its role in bacterial antibiotic resistance, and potential associations with autoimmune disorders. Finally, we discuss emerging research avenues delving into novel DHFR inhibitors for cancer therapy, strategies to combat DHFR-mediated antibiotic resistance, and the exploration of DHFR gene polymorphisms in personalized medicine approaches for autoimmune diseases. This review underscores the critical role of DHFR in both normal cellular processes and various disease states, paving the way for future advancements in targeted therapeutic interventions.

Keywords: Dihydrofolate Reductase, Folate Metabolism, Cancer, Antibiotics, Autoimmune Diseases, Personalized Medicine.

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35 Gender inequality in sports: An examination of its history, current state, and implications for female athletes

Paper ID V10I1-1206 · Pages 178-179 · Sports History

Hitarth Jain, Student, Heritage Xperiential Learning School, Nangli Umarpur, Haryana

Gender inequality persists as a notable challenge within the realm of sports, characterized by disparities in opportunities, resources, and recognition between male and female athletes. Despite advancements, this review underscores the enduring nature of gender inequality in sports and explores its historical roots, contemporary manifestations, contributing factors, and repercussions for female athletes. Drawing attention to societal perceptions of gender roles, underrepresentation of women in leadership roles, and instances of gender-based discrimination and harassment, this paper advocates for concerted efforts by sports organizations and society to rectify these inequalities and foster an environment conducive to gender equity in sports.

Keywords: Gender Inequality, Sports, Female Athletes, Opportunities, Resources, Recognition, Societal Perceptions, Leadership Roles, Discrimination, Harassment, Gender Roles, Media Coverage

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36 Research on Conductor

Paper ID V10I1-1191 · Pages 180-181 · Conductor

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Conductors play a pivotal role in the world of electricity, serving as the arteries through which energy flows to power our modern society. This abstract explores the multifaceted nature of conductors, examining their significance in both electrical systems and societal frameworks. In the realm of electricity, conductors are essential components, facilitating the transmission of electrical energy from power sources to end-users. Their

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material composition, such as copper, aluminum, or other alloys, influences conductivity and efficiency, impacting the performance of electrical networks. Through intricate engineering and design, conductors optimize energy transfer while minimizing losses, ensuring the reliability and stability of power grids. Beyond their technical functions, conductors hold symbolic importance, embodying the interconnectedness of human endeavors and technological progress. They represent the infrastructure that sustains modern civilization, enabling communication, commerce, and countless facets of daily life. The expansion and enhancement of electrical conductor networks parallel societal development, reflecting the evolution of human ingenuity and aspirations. Furthermore, conductors serve as metaphors for leadership and influence in various social contexts. Just as electrical conductors guide the flow of energy, leaders navigate and shape the currents of human interaction and collective endeavors. Whether in business, politics, or community initiatives, effective conductors exhibit qualities of adaptability, resilience, and vision, driving progress and fostering cohesion. In conclusion, the conductor transcends its physical manifestation as a component of electrical systems, embodying a convergence of technical prowess, societal significance, and metaphorical resonance. Understanding the roles and implications of conductors enriches our appreciation of both the infrastructure that powers our world and the dynamics that define human interactions and aspirations.

Keywords: Conductors, efficiency, material composition

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37 The marketing power of emotion

Paper ID V10I1-1215 · Pages 182-185 · Marketing

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In today's business landscape, customers are the lifeblood of enterprises, making them invaluable assets that require careful attention to attract and retain. Scholars like Ph. Kotler and D. Jokubauskas underscore the importance of advertising in resonating with customers and eliciting desired responses. This symbiotic relationship between advertising and psychology has deepened over time, with advertisers leveraging psychological concepts to craft more impactful advertisements. This paper offers a comprehensive exploration of this intricate relationship between advertising and psychology, underscoring their pivotal roles in understanding consumer behavior and shaping effective advertising strategies. Through an examination of emotions, music, shock tactics, humor, social proof, liking, and scarcity in advertising, this paper provides valuable insights into how psychological principles inform and enhance advertising practices, ultimately driving customer engagement and loyalty.

Keywords: Marketing, Consumer Psychology, Consumer Behavior, Advertising, Psychological Principles, Emotions

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38 Enhancing organizational Governance: A proposal for COBIT 2019 Maturity Assessment

Paper ID V10I1-1217 · Pages 186-194 · Information Security

Taha Qureshi, Nangia and Co LLP, Mumbai

Background: This paper introduces a structured methodology for assigning maturity levels in accordance with The Control Objectives for Information and Related Technologies (COBIT) 2019 framework. The conventional method of evaluating an organization's COBIT Performance Management (CPM) often concentrates solely on capability levels, given the absence of a well-defined approach for assigning maturity levels in the framework. The proposed methodology introduces an approach aligned with the principles of performance management designed to quantify the maturity of the governance and management objectives from the framework and collectively represent their impact on the overall organization. Discussion: Maturity levels provide management with a comprehensive understanding of the current state of governance and management practices in the organization. Maturity assessment offers a holistic perspective, furnishing management with a thorough overview of the organizational landscape. COBIT 5 released in the year 2012, followed the Process Assessment Model (PAM) model for assigning capability and maturity values. Since there is no defined PAM for COBIT 2019, The Capability Maturity Model Integration (CMMI) levels defined by the CMMI Institute can be used to represent process improvement efforts, in other words, it can measure capability levels along with other factors to give value to the organizations process for measuring maturity. Up to this point, there exists no formalized methodology for assigning or deriving maturity levels for an organization using the COBIT framework. The impetus for this paper stemmed from Luis Gorgona’s, encouragement in the ISACA blog for readers to explore the COBIT 2019 framework as a valuable resource for developing an approach to model, assessing maturity scores, and identifying essential factors for measuring their organization's performance. Research Objectives: This paper aims to achieve the following objectives: 1. The Necessity and Challenges in the Assigning of Maturity Levels. 2. Proposing a Methodology for Assigning Maturity Levels for the COBIT 2019 Framework. Conclusion: In conclusion, this paper encourages readers, auditors, and professionals to go beyond a basic evaluation of capability levels. By which organization leaders can attain an accurate comprehension of their existing Information and Technology(I&T) practices through the adoption of this systematic approach. Consequently, leading to well-informed decision-making, enhancing overall coverage of COBIT 2019 objectives.

Keywords: The Control Objectives for Information and Related Technologies (COBIT), COBIT Performance Management (CPM), Capability Maturity Model Integration (CMMI), Process Assessment Model (PAM).

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39 Prediction and detection of malicious URL using machine learning

Paper ID V10I1-1211 · Pages 195-219 · Data Science

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The efficient identification of malicious URLs has become crucial due to their growing hazard to individuals, companies, and digital infrastructure. This study evaluated multiple machine learning algorithms for their ability to predict and identify dangerous URLs. The research focused on the Random Forest Classifier since it outperformed rival models in binary and multi-class classification tasks. With 98.9% accuracy in binary

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classification, the Random Forest Classifier performed well. This shows the classifier can identify safe and hazardous URLs. The system's precision of 98.8%, F1 score of 99.3%, true positive rate of 99.7%, and true negative rate of 95.6 demonstrate its dependability. Multi-class classification accuracy was 97.0%, and precision, recall, and F1 scores were good again for the Random Forest Classifier. This research provides practical tips for enhancing web security and shows how transparent AI models and interdisciplinary teamwork may solve complicated cybersecurity problems. This research has made a significant contribution to the body of known information, and its significance lies in the fact that it provides both benefits.

Keywords: Malware, Machine Learning, Url, Malicious.

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40 Emotional wellness in education: A dive into the academic consequences of mental health

Paper ID V10I1-1194 · Pages 220-224 · Psychology

Pallika Dhingra, Student, Indira Gandhi Delhi Technical University for Women, New Delhi, Delhi

This research explores the relationship between mental health and academic performance among university students. A qualitative survey of 100 second-year students at Indira Gandhi Delhi Technical University for Women uncovers challenges and coping mechanisms related to mental health. It was found that a considerable percentage remains unaware of available mental health resources on campus. Preliminary findings include the critical need for mental health support, suggesting the importance of integrating such facilities within universities. The relationship can further be explored by leveraging the right computer science tools to collect and analyze data.

Keywords: Mental Health, Academic Performance, Students

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41 Analysis of Brain Tumor Detection and Segmentation Using Enhanced Deep Learning Algorithm Kernel CNN with M-SVM

Paper ID V10I1-1187 · Pages 225-230 · Brain Tumor Detection

Nishant Kumar Singh, Research Scholar, Bhagwant University, Ajmer, Rajasthan
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The prevalence of brain tumors necessitates the development of accurate and efficient diagnostic tools. This study presents an innovative approach to brain tumor detection and segmentation by leveraging an enhanced deep learning algorithm, specifically a Kernel Convolutional Neural Network (CNN) coupled with a Modified Support Vector Machine (M-SVM). The proposed method aims to improve both the sensitivity and specificity of brain tumor detection while enhancing the precision of tumor boundary delineation. The study begins with the preprocessing of magnetic resonance imaging (MRI) data, including normalization and noise reduction, to optimize the input for the subsequent deep learning model. The Kernel CNN is designed to extract hierarchical features from the MRI images, capturing intricate patterns indicative of tumor presence. The integration of a kernelized approach enhances the model's ability to discern complex relationships within the data, thereby

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improving overall detection accuracy. In addition to tumor detection, the study introduces a novel segmentation strategy based on a Modified Support Vector Machine (M-SVM). The M-SVM algorithm refines the results obtained from the CNN, facilitating precise delineation of tumor boundaries. This two-step approach not only enhances the accuracy of tumor localization but also provides valuable information for subsequent medical interventions. To evaluate the proposed methodology, extensive experiments are conducted using benchmark datasets, and the results are compared with existing state-of-the-art techniques. Quantitative metrics such as sensitivity, specificity, precision, and Dice coefficient are employed to assess the performance of the model. The findings demonstrate that the proposed Kernel CNN with M-SVM outperforms conventional methods, showcasing its efficacy in both tumor detection and segmentation tasks. In conclusion, this research presents a robust and advanced framework for brain tumor analysis, offering a promising avenue for accurate diagnosis and treatment planning. The synergy between deep learning and support vector machines, coupled with the innovative use of kernelization, underscores the potential of this approach in contributing to the ongoing efforts to improve brain tumor diagnostics and patient outcomes

Keywords: Magnetic Resonance Image, Brain Tumor Segmentation, Deep Learning

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42 Urban Development Sustainability: Public Policy Perspectives in South Asia and Europe

Paper ID V10I1-1221 · Pages 231-239 · Urban Development- Public Policy

Debashis Chakrabarti, Professor, Assam University, Silchar, Assam

In South Asia, the existence of approximately 250 million individuals in informal settlements indicates a pressing challenge posed by urbanization. While urban growth presents opportunities for economic revitalization and improved living standards, the region confronts formidable barriers to prosperity and enhanced quality of life. Achieving sustainable urban development necessitates forward-thinking public policies that prioritize environmental preservation, social equity, and economic advancement. A comparative analysis of implementation strategies underscores the significance of tailored approaches responsive to the distinct challenges and potentials of cities. By exchanging best practices, lessons learned, and innovative solutions, urban centers can advance sustainable development agendas and foster resilient, thriving communities for generations to come. This research investigates the hurdles faced by urban areas in achieving sustainability amidst rapid population expansion, environmental decline, and socio-economic disparities. Through comparative analysis of policy frameworks and implementation tactics across varied urban landscapes, the study assesses the efficacy of diverse interventions, identifies pivotal factors driving success, and offers insights into optimal practices for promoting urban sustainability.

Keywords: Urban Development, Sustainability, Public Policy

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43 Risk Management in Renewable Energy Finance; Analyzing the Implication of Quantitative Risk Management Techniques Applied in Financing Renewable Energy Projects on Fostering Renewable Energy Growth and Its Integration into the US Energy Sector

Paper ID V10I1-1222 · Pages 240-252 · Energy

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Risk management plays a critical role in the development of renewable energy projects in the United States. This paper analyzes the implications of quantitative risk management techniques applied in financing renewable energy projects on fostering renewable energy growth and its integration into the US energy sector. By examining the financial risks associated with renewable energy investments and the strategies to mitigate them, this study sheds light on how efficient risk management can enhance the attractiveness of renewable energy initiatives to investors and financial institutions. The paper also explores the role of government policies, market dynamics, and project selection criteria in shaping the risk landscape of renewable energy investments. Through a systematic review of the literature and case studies, the paper demonstrates how quantitative risk management methodologies, such as probabilistic modeling, scenario analysis, sensitivity analysis, and Monte Carlo simulation, provide valuable insights for decision-making, resource allocation, and project resilience in the dynamic energy market. Overall, this research contributes to a deeper understanding of the importance of risk management in promoting the growth and sustainability of renewable energy in the United States.

Keywords: Risk Management, Renewable Energy Finance, Quantitative Techniques, United States, Energy Sector, Financial Risk, Probabilistic Modeling, Scenario Analysis, Monte Carlo Simulation, and Project Selection.

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44 Cyber Analytics: Modelling the Factors Behind Healthcare Data Breaches for Smarter Security Solutions

Paper ID V10I1-1197 · Pages 253-264 · Data Analytics

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This study employs a comprehensive methodology to analyze healthcare data breaches in the United States, utilizing information extracted from the U.S. Department of Health and Human Services Portal. The unbalanced nature of the data across different years is addressed through meticulous examination of breach occurrences,

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encompassing diverse factors such as state, covered entity type, affected individuals, breach type, and entity classification. The results section unveils key insights into the prevalence and impact of healthcare data breaches. Hacking and IT incidents emerge as the predominant breach type, significantly affecting individuals, followed closely by unauthorized access/disclosure and theft. The study further dissects the data by business type, revealing that business associates and healthcare providers bear the brunt of breaches, with health plans and healthcare clearing houses also facing substantial challenges. The study conducted cyber analytics on the factor behind healthcare data breaches for smarter security solutions. This is based on the backdrop of increasing cybercrime in the United States. The study utilized secondary data, which includes indicators such type of breach, location of breach, the number of individuals affected, business type, and the time of cyberattack. The findings revealed that hacking and information technology incidents are the most prevailing cyberattack on healthcare data, with healthcare providers and business associate being the most affected entity. The findings also revealed that network server and email are the major location of healthcare data breached. Furthermore, the data indicated that there is more breach in 2023 than other years, indicating a significant rise in cyberattacks in the healthcare. It was suggested that healthcare entities need to develop and regularly update incident response plans to ensure a swift and effective response in the event of a cybersecurity breach, which should include clear communication strategies to prevent losing data to cybercriminals. The concentration of breaches in specific entities, states, and quarters underscores the diverse and pervasive nature of cybersecurity challenges in the healthcare sector. Continuous efforts to enhance cybersecurity frameworks are deemed critical to safeguard sensitive healthcare data and protect individuals' privacy.

Keywords: Cyber Analytics, Cyber Security, Healthcare Analytics, Data Breach, Security Solution

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45 Advantages and Disadvantages of Consumer Psychology: A Critical Analysis

Paper ID V10I1-1226 · Pages 265-268 · Consumer Psychology

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Consumer psychology is a dynamic field that delves into the intricate interplay of human cognition, emotions, and perceptions within the context of consumer behavior. This paper critically analyzes the advantages and disadvantages of consumer psychology in shaping marketing strategies and influencing consumer decision-making processes. The advantages of consumer psychology include its capacity to facilitate consumer differentiation, tailor marketing strategies to specific target audiences, anticipate market trends, and prioritize customer service. By understanding consumer behavior and preferences, businesses can enhance consumer engagement, foster brand loyalty, and gain a competitive edge in the marketplace. However, consumer psychology also presents challenges and limitations. Concerns such as the prevalence of fear of missing out (FOMO), overlooking broader sociocultural influences, and ethical considerations regarding privacy and manipulation need to be addressed. Marketers must navigate these challenges ethically and responsibly to maintain consumer trust and build enduring brand-consumer relationships. The paper emphasizes the importance of integrating consumer psychology into marketing strategies through personalized outreach, emotional bonding, and understanding cognitive biases. By leveraging insights from consumer psychology, businesses can craft resonant and impactful marketing campaigns that foster meaningful connections with

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their target audiences. Consumer psychology offers valuable insights into consumer behavior and decision-making processes, empowering businesses to adapt and thrive in the ever-evolving marketplace. By acknowledging its advantages and addressing its limitations, marketers can harness the transformative potential of consumer psychology to drive sustainable business growth and enhance consumer experiences.

Keywords: Consumer Psychology, Marketing Strategies, Consumer Behavior, Cognitive Biases, Ethical Considerations

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46 Women's participation in STEM from 1900s to 2000s

Paper ID V10I1-1228 · Pages 269-276 · Science

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This research paper examines the historical trajectory of women's participation in STEM fields, focusing on Mathematics and Sciences from the 1900s to the 2000s. It analyzes data across various stages of women's educational and professional lives, highlighting prevalent barriers such as biases and stereotypes. Case studies are utilized to illustrate these barriers, along with proposed methods to address them.

Keywords: Women's Participation, STEM, Gender Inequality, Computer Science

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47 The Utilization of Human Psychology by Multinational Corporations in Targeting Specific Audiences through Advertisements

Paper ID V10I1-1227 · Pages 277-279 · Psychology

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This paper investigates the intricate strategies employed by multinational corporations (MNCs) to harness human psychology in advertising campaigns aimed at specific target audiences. Through an analysis of various psychological factors, including emotional appeal, social proof, scarcity and urgency, color psychology, cognitive biases, storytelling, personalization, neuromarketing techniques, and behavioral economics, the study examines how MNCs have evolved their marketing methodologies to integrate psychological principles. By delving into empirical examples and theoretical frameworks, the research illuminates the symbiotic relationship between economics and psychology in modern marketing strategies, highlighting how leveraging psychology as an asset can enhance profitability and foster business expansion for MNCs.

Keywords: Multinational Corporations, Human Psychology, Advertising, Target Audiences, Marketing Strategies, Consumer Behavior, Emotional Appeal, Social Proof, Scarcity, Urgency, Color Psychology, Cognitive Biases, Storytelling, Personalization, Neuromarketing Techniques, Behavioral Economics.

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48 Leveraging Social Media for Business Growth: Exploring Strategies and Impacts

Paper ID V10I1-1225 · Pages 280-284 · Business

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Social media has become a pivotal tool for businesses, reshaping communication paradigms and offering multifaceted opportunities for growth. This paper explores the strategies and impacts of leveraging social media for business expansion. It delves into the advantages of social media marketing campaigns, including affordability, enhanced communication channels, rapid feedback systems, and increased brand awareness. Additionally, the role and impact of influencers in brand marketing are examined, emphasizing their ability to shape consumer behavior and drive engagement. The paper also outlines strategic approaches to enhance the effectiveness of social media marketing campaigns, including clearly defining campaign goals, understanding target audiences, and analyzing data for optimization. Case studies exemplify successful social media campaigns, showcasing how businesses have capitalized on platforms like Twitter and Reddit to foster consumer interest and participation. Furthermore, the paper addresses the disadvantages and risks associated with social media, such as content saturation, investment requirements, and security concerns. Despite challenges, the paper concludes that the benefits of social media for business growth outweigh the drawbacks, emphasizing its indispensable role in modern marketing strategies. It underscores the transformative potential of social media to enhance brand visibility, foster meaningful connections with audiences, and drive innovation in the dynamic landscape of contemporary business.

Keywords: Social Media, Business Analytics, Growth Strategies, Return on Investment (ROI), Marketing Dynamics

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49 GANs for Synthetic Data Generation: Advancements and Challenges using Machine Learning

Paper ID V10I1-1234 · Pages 285-293 · Machine Learning

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Generative Adversarial Networks (GANs) have emerged as a powerful tool for addressing data scarcity and privacy concerns in various domains such as healthcare, finance, and security. This paper provides a comprehensive overview of GANs and their applications in synthetic data generation. We discuss the importance of synthetic data, the challenges associated with its generation, and techniques for improving GAN performance. Through case studies and experiments, we demonstrate the effectiveness of GANs in generating realistic and diverse synthetic data. We also examine ethical considerations surrounding the use of synthetic data and outline future directions and challenges in this rapidly evolving field. Overall, this paper highlights the potential of GANs to revolutionize data generation and addresses key considerations for their responsible deployment in sensitive domains.

Keywords: Generative Adversarial Networks (GANs), Deep learning, Synthetic data generation, Data scarcity

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50 Enhancing Cybersecurity Resilience in a Multinational Semiconductor Organization: A Comprehensive Strategy for Threat Mitigation and Defense Strengthening

Paper ID V10I1-1240 · Pages 294-302 · Cybersecurity

Ugochukwu Eneh, Student, University of Maryland College Park, Maryland

Tososu Semiconductors LLC, a multinational corporation specializing in semiconductor development for medical and automotive sectors, faced numerous cyber threats including ransomware, phishing, and DDOS attacks. This paper presents an in-depth analysis of the attacks experienced by the organization and proposes a comprehensive cybersecurity solution within the constraints of a $600,000 annual budget. The analysis reveals vulnerabilities in the company's network environment, including lack of security awareness among employees, absence of email security systems, and inadequate threat management infrastructure. Subsequently, a multi-faceted solution is proposed to address these vulnerabilities. The proposed solution encompasses the implementation of Unified Threat Management (UTM) systems, human awareness training, backup solutions, DDOS protection, DMZ implementation, password policy enhancement, multi-factor authentication, and phishing detection software. These solutions aim to fortify the organization's security posture, mitigate risks, and prevent future attacks. A detailed breakdown of costs and budget allocation is provided, ensuring adherence to financial constraints while maximizing security measures. Additionally, the paper discusses the implications of the proposed solutions, emphasizing the importance of employee vigilance and continuous security updates. Ultimately, this paper underscores the significance of proactive cybersecurity measures in safeguarding organizational assets and mitigating cyber threats in an evolving technological landscape.

Keywords: Cybersecurity, Semiconductor Industry, Ransomware, Phishing Attacks, DDOS Attacks, Unified Threat Management (UTM), Human Awareness Training, Backup Solutions, Multi-Factor Authentication, DMZ Implementation, Password Policy, Phishing Detection Software, Budget Allocation, Vulnerability Analysis, Network Security

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51 A Descriptive Exploratory Study To Assess The Risk Factors For the Development of bedsores among Lower Segment Fracture Patients Admitted In the Orthopedic Ward of JNM Hospital, Kalyani

Paper ID V10I1-1243 · Pages 303-309 · Nursing

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The research study was conducted to assess the risk factors for the development of bedsore among lower-

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segment fracture patients admitted to the orthopedic ward, JNM Hospital, Kalyani. The aim of this study was to identify the risk factor for the development of bedsore among lower-segment fracture patients. A quantitative research approach was selected for the study. It was a methodological study conducted in one phase. In this study questionnaire method was followed to collect the data. The sample size for the study consisted of 60 samples who were admitted to the Orthopedic Word of JNM Hospital both male and female wards. The sampling technique was non-probability convenience sampling. Open questionnaires with 6 questions were used to assess the risk factors for the development of bedsore among lower-segment fracture patients. After analysis of the results and after reviewing the different literature from PubMed, Medline, nursing and health science, etc. The Study results showed that the higher risk of bedsore in the age group 51-60 years 23(38.33%) so adult age mainly acts as a risk factor for bedsores. And the other hand 48 (80%) persons are occasionally moisturized in moisture, and the incidence rate of bedsores is the highest in Orthopedic surgery ward it can be said that two aspects of demographic variables are family monthly income and nutritional status in our study. So from the association, we can say that the risk for bedsores is mostly present among the patient of orthopedic ward

Keywords: Risk Factors, Bedsore, Lower Segment Fracture

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52 Plot pilot

Paper ID V10I1-1235 · Pages 310-314 · Computer Science

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The real estate industry is undergoing a significant transformation with the advent of digital technologies. Traditional real estate transactions often involve intermediaries, leading to high fees, lack of transparency, and inefficiencies. In response to these challenges, this paper proposes the development of a mobile application designed to revolutionize real estate transactions. The application aims to provide comprehensive information on available properties, eliminate the need for traditional brokers, and integrate seamlessly with government systems for land registration. By leveraging components such as database management systems, user interfaces, security measures, authentication and authorization systems, GIS integration, documentation management, and mobile accessibility, the proposed solution promises to enhance transparency, reduce costs, and improve efficiency in property dealings.

Keywords: Real Estate Transactions, Mobile Application, Government Integration, Transparency, Efficiency, Database Management, Gis Integration, Security Measures

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53 Cyber security and government: safeguarding the public sectors in the digital era

Paper ID V10I1-1246 · Pages 315-320 · Cybersecurity

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This publication emphasizes the critical importance of bolstering cybersecurity in the public sector due to the increasing reliance on digital technologies and the significant risks posed by cyber threats. It discusses the vulnerability of government agencies to cyberattacks, highlighting examples such as the OPM breach, the Colonial Pipeline ransomware attack, and the Solar Winds supply chain attack amongst others. The public sector's vulnerability to cyber threats is attributed to factors such as the wealth of sensitive data it holds, outdated technology and security measures, and the potential for public disclosure that can lead to widespread impact and public scrutiny. Moreover, geopolitical strategies and cyberwarfare play a significant role, with cyberattacks on government organizations having profound implications for national security and international relations. This publication also explores the strategies to safeguard the public sector in the digital era, including security awareness training, multi-factor authentication, endpoint security, network segmentation, regular patches, and updates, incident response planning, backup, disaster recovery, zero trust architecture, and continuous vulnerability assessments. Overall, it underscores the urgent need for robust cybersecurity measures to protect sensitive data and critical infrastructure from cyber threats.

Keywords: Cybersecurity, Government Operations, Cyber Threats, Data Breaches, Public Sector, Cybercrime, Critical Infrastructure, Cyber-Attacks, Risk Management, National Security, Governance Framework, Safeguarding

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54 Chrome extension to detect malicious URLs using support vector machine algorithm

Paper ID V10I1-1252 · Pages 321-326 · Malicious Url Detection

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There are a vast number of domains that leads the user to phishing websites for tricking the user to steal their sensitive information or inject malware into the system. In this paper, we will discuss about the support vector machine algorithm and how we have used the weights associated with each attribute of the trained SVM model in a chrome extension. This tool will identify the nature of the URL and avert the users from becoming a victim of phishing attack by notifying the user about the malicious URL on each page load via an alert box as safe or unsafe URL.

Keywords: URL, Support Vector Machine, SVM, Chrome Extension, Malicious URL, Machine Learning, Feature Extraction, JavaScript

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55 How UI/UX enhances e-commerce sales

Paper ID V10I1-1245 · Pages 327-333 · Ui

Rukmani Pareek, Student, Banasthali Vidyapith, Radha Kishnpura, Rajasthan

This research paper explores the significance of user experience (UX) and user interface (UI) design in the context of e-commerce and its impact on driving sales. With the exponential growth of online shopping, businesses are facing intense competition, making it crucial to differentiate themselves through superior user experiences. This study aims to identify the key elements of UX design AND UI design that can enhance the e-commerce user journey and ultimately drive sales. The research involves an introduction , methodology and finding and analysis on how user experience and user interface design has an impact on sales. This fits into the context of the field of the user experience as the end-user is central to optimizing the online experience, so gauging it will help optimize features in an application or platform. This also fits into the context of information systems as all applications and businesses, many of which are in the e-commerce and fashion spaces, utilize the technologies and concepts of information systems. This is not the first time this question has been asked as to how user experience,user interface drives e commerce sales a survey was conducted using Qualtrics, since conducting(a survey is a common method used to answer questions concerning the user experience). Subjects were asked preliminary questions, and questions addressing the five variables of user intention in buying products, usability, ease of use, findability, and desirability. Survey data was collected, and two multiple regression analyses were performed. The statistical significance of the results is determined, and then the relevance is evaluated. It was found that if an application in the mobile e-commerce fashion space is useful to the user, then it is desirable to the user. It was also found that if an app is desirable to the user, users in turn have the intention to buy products using these apps. From this research, next steps include obtaining a larger sample size to get more statistically significant data. Future research includes testing other factors of the user experience, modifying the survey to further test existing variables, and exploring different niche industries in mobile e-commerce applications to explore the user experience in other areas of e-commerce. Regarding the user interface which makes it visually pleasing , it does not only include aesthetic, many people are confused thinking that user interface is just about aesthetic which is not the case User interface ust like user experience holds a lot of importance , a lot of focus , strategies , ideas goes into making a website user friendly as well as visually accurate and pleasing , and to make that accurate and pleasing and easy to use.

Keywords: UI/UX Design, E-commerce, Online Shopping, Conversion Rates, Customer Loyalty, Luxury Brands

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56 Time management strategies for effective leadership: A comprehensive study

Paper ID V10I1-1258 · Pages 334-340 · Management

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Time is of the essence for managers because they have many things to do in their hands simultaneously. The research paper seeks to provide a detailed analysis of time management techniques specifically tailored for leaders. This paper examines different time management techniques as well as their relevance to leadership and organizational success through extensive literature review and empirical evidence. In addition, it addresses

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the difficulties faced by leaders when managing their time effectively and suggests pragmatic approaches for overcoming them. This paper enhances leadership efficacy through a comprehensive synthesis of current literature and practical recommendations aimed at optimizing time management.

Keywords: Leadership, Effectiveness, Time Management

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57 Addressing the Needs of Seniors through Diverse Health Interventions

Paper ID V10I1-1260 · Pages 341-346 · Social Health

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This research paper explores the multifaceted challenges faced by the aging population and proposes a comprehensive approach to address the diverse health needs of seniors through a range of interventions. The study synthesizes current literature on the physical, mental, and social aspects of aging, highlighting the intricate interplay between these factors. By analyzing various health interventions, including medical treatments, lifestyle modifications, and community-based programs, the paper aims to identify effective strategies for promoting holistic well-being among seniors. Additionally, the research investigates the role of technology in enhancing healthcare delivery to seniors and fostering social connectivity. Through an integrative and inclusive perspective, this paper contributes to the ongoing discourse on optimizing health outcomes for the elderly, emphasizing the importance of tailoring interventions to the unique and evolving needs of this demographic. The findings underscore the significance of a multidimensional approach to senior health, encouraging collaboration among healthcare professionals, policymakers, and community stakeholders to create a more responsive and sustainable healthcare system for our aging population.

Keywords: Intergenerational Understanding, Holistic Senior Healthcare, Bridging Technological Disparities, Multidimensional Aging Challenges, Dementia and Cognitive Decline

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58 Key disparities between quantitative and qualitative research methodologies

Paper ID V10I1-1268 · Pages 347-353 · Research

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This comprehensive review explores the key disparities between quantitative and qualitative research methodologies, aiming to enhance researchers' comprehension and facilitate informed decision-making in study design. The article underscores the significance of understanding these methodologies for researchers, emphasizing their distinct frameworks, tools, and philosophical underpinnings. The review spans the period from 2000 to 2024, systematically surveying English-language literature across prominent databases.

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Employing a strategic search strategy and Boolean operators, the investigation focuses on discerning significant characteristics of qualitative research methodologies, including research paradigms, data collection, and analysis methods. MeSH terms were applied in PubMed, and strict inclusion criteria were set for articles, resulting in the evaluation of 44 selected papers. The collected material, organized based on scientific content, provides a wealth of information on the characteristics of both quantitative and qualitative research methodologies. The characteristics of qualitative research are elucidated through illustrative examples, emphasizing its naturalistic, inductive, and bottom-up approach. This method explores phenomena in-depth, using unstructured or semi-structured data collection, and often culminates in a descriptive report. However, concerns about reliability, validity, and time-consuming data gathering are acknowledged. In contrast, quantitative research, characterized by its scientific, deductive, and top-down approach, employs laboratory settings and structured data collection methods, concluding with statistical reports and emphasizing reliability and validity. The review recognizes the need for larger sample sizes in quantitative research and highlights its controlled, structured, and less time-consuming data collection methods

Keywords: Qualitative Research, Quantitative Research, Scientific Research, Naturalistic Research, Inductive Approach And Deductive Approach.

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59 Chemical Structure and Stability of Polyethylene and Polypropylene

Paper ID V10I1-1256 · Pages 354-358 · Chemistry

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Polyethylene (PE) and polypropylene (PP) are two of the most widely used thermoplastic polymers in various industries due to their exceptional mechanical properties, cost-effectiveness, and versatility. Understanding the stability of these polymers is crucial for ensuring their prolonged performance and sustainability. This study aims to comprehensively investigate the stability of polyethylene and polypropylene under various environmental and processing conditions.

Keywords: Polyethylene, Polypropylene, PE, PP, Thermal, Thermogravimetric Analysis, TGA, HDPE, iPP, Temperature, Degradation, UV, UV-vis, Radiation, Spectroscopy, Polymer, Colour, Transmittance, Chemical Stability, FTIR, Peak

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60 The outbreak of Extensively Drug-resistant Pseudomonas aeruginosa associated with the use of Artificial Tears and Contraction in hospital settings – An Epidemiological Overview

Paper ID V10I1-1257 · Pages 359-366 · Biology

Arhaan Kohli, Student, Step By Step School, Noida, Uttar Pradesh

Public health concern in the US due to the outbreak of extensively drug-resistant pseudomonas aeruginosa bacterium present in certain eye drops. Introduction: Drug-resistant mechanisms are present in this bacteria. Common exposures to the bacterium. Characteristics of the bacterium including morphology, biochemical characteristics, pathogenicity, resistance, etc. biological classification of the bacterium. Common exposures to

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the bacteria. Cases of the bacteria, severity of the disease, symptoms. treatments, prevention, and limitations of the study.

Keywords: Resistance, Antibiotics, Exposures, Ezricare Artificial Tears, Pathogenicity, VIM-GES-CRPA, Symptoms, Treatments, Prevention

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61 Understand the escalating trends of cyber frauds in India: a special focus on health care centers.

Paper ID V10I1-1281 · Pages 367-373 · Cyber Frauds In Health Care Center

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Cybersecurity poses a threat and security to various security centers including health care. there are various digitization services in India, that led to growing certain trends of cyberfraud in target healthcare centres. this literature survey aims to present evidence of cyber fraud with special reference to health care centers. I review certain reports and articles to get an idea about various research papers. the survey aims to identify common types of cyber fraud that target healthcare centers, and vulnerabilities, impact patients and healthcare providers, and apply various strategies of prevention. the survey involves enhancing awareness and cyber fraud trends in healthcare centers. inform policy decisions and guide cybersecurity measures.

Keywords: Healthcare Centers, Cyber Fraud, Vulnerabilities, Strategies

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62 Creato all-in-one SaaS platform with AI-powered tools

Paper ID V10I1-1251 · Pages 374-376 · Computer Science And Engineering

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Creato is a SaaS platform revolutionizing content generation for developers, designers, and multimedia professionals. Offering a comprehensive suite of tools, Creato seamlessly integrates code, image, video, and audio generation functionalities into a single, intuitive interface. With support for Code Generation, users can effortlessly write, test, and deploy code for web applications and dynamic websites. Creato's image generation capabilities empower users to design stunning visuals and advanced AI based image generation, while its video generation features simplify the creation of engaging multimedia content. Additionally, Creato facilitates audio generation, allowing users to produce custom music tracks, sound effects, and voiceovers. By consolidating workflows and automating repetitive tasks, Creato boosts productivity and creativity, fostering collaboration through seamless project sharing and feedback gathering. Scalable and flexible, Creato caters to both individual creators and large teams, offering tailored subscription plans and robust infrastructure.

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Keywords: Next-JS, SaaS, AI, Code Generation

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63 The role of artificial intelligence and machine learning in enhancing customer experience in Nigeria digital banks

Paper ID V10I1-1267 · Pages 377-382 · Artificial Intelligence

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The banking industry is crucial for economic growth and stability, with Nigerian banks playing a significant role in the country's economic system. The banking sector has evolved significantly, especially with the emergence of digital banking, driven by technological advancements like smartphones and the Internet. Digital banking offers benefits such as convenience, accessibility, cost savings, improved service quality, and competitiveness. Customer experience and service quality are essential in banking, with customer satisfaction determining the success of banks. Segmentation of customers and understanding consumer behavior helps in providing effective services. Customer relationship management (CRM) is vital for retaining existing customers, attracting new ones, and upgrading services to meet customer needs. Machine learning (ML) and artificial intelligence (AI) have revolutionized digital banking, offering numerous benefits such as fraud detection, real-time transaction monitoring, personalized recommendations, customer behavior analysis, risk reduction, cost savings, improved decision-making, and enhanced customer experience. AI-powered chatbots and virtual assistants provide 24/7 assistance, reducing wait times and improving customer satisfaction. These technologies also help in mitigating biases in credit scoring, promoting fairness and equal access to financial services. Overall, AI and ML have transformed the banking industry, leading to improved operations, customer service, risk management, and profitability while offering a more inclusive and personalized banking experience.

Keywords: Banking Industry, Nigerian banks, Financial System, Digital Banking, Technological Advancements, Customer Experience, Customer Relationship Management (CRM), Machine Learning (ML), Artificial Intelligence (AI), Inclusive Banking, and Technological Innovation.

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64 Adoption of Electric Vehicles: Policies, Adoption and Importance

Paper ID V10I1-1284 · Pages 383-385 · Sustainability

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This paper talks about policies, adoption, and the importance of Electric Vehicles(EVs). It speaks about policies implemented by India, The Netherlands, and The United States of America and makes a comparison between them. It also questions if EVs are really sustainable or not, with there being pros and cons to them. It also talks about the challenges affecting the implementation of wide-scale EV infrastructure and the full adoption of EVs.

Keywords: Electric Vehicles, Policymaking, Netherlands, India, USA, FAME

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65 Role of Music Scores in the Success of Movies

Paper ID V10I1-1285 · Pages 386-391 · Music

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Music scores play an essential role of contribution to the narrative meaning of a film, where songs stimulate the conscious mind using lyrics and melodies to establish a mood in its duration, and background scores stimulate the subconscious mind to interpret the mood and cause the audience to perceive the film a certain way, through close manipulation. This research investigates the relation between the popularity of songs of a film and its success, to prove the above ideas in terms of established trends. However, the dataset does not present any such relation, resulting in the conclusion that music scores do still hold an essential narrative role, however they may not directly contribute to the success of a movie through their popularity as individual songs, instead the connect formed by different background scores which are not included in the dataset may play a greater role in allowing the subconscious mind to interpret a film a certain way.

Keywords: Narrative Role, Background Scores, Indian Cinema, Popularity, Subconscious, Mood, Manipulation, Success of Films, Bollywood Movies

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66 Examining the Impact of Gender Bias and Stereotypes on Women's Participation and Advancement in Technological Fields

Paper ID V10I1-1282 · Pages 392-405 · Technology

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This study tries to uncover the primary causes of gender discrepancies in the expanding tech industry through a thorough assessment of the literature, qualitative analysis of prior research, and survey data. These factors can range from structural injustices and lack of mentorship to social biases and cultural ethos. It also adds to the continuing conversation about women in technology by highlighting challenges as well as opportunities. It also offers guidance to industry executives and legislators who are working to build a more diverse and inclusive digital sector.

Keywords: Women In Tech, Gender Disparities, It Sector, Glass Ceiling, Women Participation, Social Stereotype.

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67 A challenging case Report on Evans syndrome with pregnancy

Paper ID V10I1-1270 · Pages 406-410 · Obstetrics And Gynaecology

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The simultaneous or sequential development of autoimmune hemolytic anemia (AIHA) and idiopathic thrombocytopenic purpura(ITP) is known as Evans syndrome. AIHA is characterized by the development of anti-erythrocyte auto antibodies and the destruction of erythrocytes, which causes moderate or severe anemia. Because Evans syndrome is a rare disease, little is known about the relationship between pregnancy and Evans

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syndrome.

Keywords: Idiopathic Thrombocytopenic Purpura, Autoimmune Hemolytic Anemia

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68 The concept of Group Theatre (GT)

Paper ID V10I1-1276 · Pages 411-412 · Theatre Engineering

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There is hardly any professional, commercial Theatre in India. Currently the mainstream theatre is represented by amateur, Non-profit making Theatre Groups which is categorized as'Group Theatre (GT). The concept of GT in the world was incepted in America in 1929 There is a difference between GT snd professional, commercial Theatre.

Keywords: Concept, Inception, Amateur, Professional/Commercial, Group Theatre

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69 Noise reduction in web data – A learning approach based on dynamic user interest.

Paper ID V10I1-1286 · Pages 413-417 · Machine Learning

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An advanced noise reduction technique harnessing the power of Long Short-Term Memory (LSTM) networks is introduced to tackle the issue of noise in web data. In contrast to traditional methods employed for web data noise reduction, which may grapple with complexities such as large network depths and training inefficiencies, this novel approach takes a fresh perspective. Initially designed for DE noising natural datasets, this LSTM-based algorithm has been carefully adapted and fine-tuned to specifically target noise reduction in web data. Through meticulous parameter adjustments and extensive experimentation, we have successfully demonstrated the effectiveness of LSTM in removing noise from web data, achieving high levels of efficiency. Our thorough analysis and comparative experiments underscore the potential and viability of the LSTM-based approach in the domain of web data noise reduction. This algorithm not only holds promise but also signifies its importance in advancing the field of web data processing and analysis, marking a significant step forward in enhancing data quality for web-related applications.

Keywords: Machine Learning, Noise Web Data Learning Data, User Interest, Web User Profile, Web Log Data.

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70 Women entrepreneurs- A global perspective

Paper ID V10I1-1272 · Pages 418-434 · Business And Economics

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The search for opportunities beyond the control of resources is known as entrepreneurship. The definition of "entrepreneurship" is vague. Some associate it with startups financed by venture capital and those associated with them; others apply it to any small firm. "Corporate entrepreneurship" is an oxymoron for some people and a rallying cry for others. The term "women entrepreneurs" refers to a person or group of women who start, plan, and run a business. Thus, a self-assured, imaginative, and creative woman who wants to become financially independent while also opening up job chances for others is a woman entrepreneur. Following World War II, there was a remarkable surge in the number of women working for themselves in developed nations. Despite the fact that males are much more successful in acquiring capital, businesses launched or co-founded by women outperform those started by men in a number of areas. Businesses founded by women typically have stronger revenue growth, more job growth, bolder dreams, and superior execution. The World Bank estimates that women-owned businesses in the US are generating about $3 trillion in economic growth and expanding at a rate more than twice as fast as all other businesses.

Keywords: Feminist Theories, Entrepreneurship, Professional Communities, Ecosystems, Antecedents, Comprehensive Overview, Antecedents, Governance, Exemplified, International Fund, Agricultural Development, Sustainable Business Ventures, Networks And Associations, Economic Perspective, Leveraging, Entrepreneurial Endeavors, Emotional Constraints, Trade-Offs, Renowned, Influential, CEO, Equitable Opportunities, Mentorship, Philanthropists.

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71 Preventia: Spam Alert System

Paper ID V10I1-1287 · Pages 435-439 · Aiml

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In the ever-evolving landscape of digital communication, the proliferation of spam content continues to be a pressing concern. The "Preventia: Spam Alert System" project aims to tackle this challenge head-on by implementing a comprehensive and intelligent solution for identifying and classifying spam. Through the application of the Naive Bayes algorithm, the system gains the ability to process vast amounts of data efficiently and make probabilistic predictions about whether incoming content is spam or legitimate. To bolster its capabilities further, the Spam Alert System integrates cutting edge technologies like natural language processing (NLP) to comprehend textual content more effectively. Subsequently, the Naive Bayes classifier evaluates the content, assigning a probability score that determines the likelihood of it being spam. The Spam Alert System's successful implementation delivers a powerful and flexible solution to the problem of spam, endowing users with heightened security and protection from fraudulent activities and potential privacy breaches. With seamless integration into popular communication platforms, users can enjoy real-time defence against malicious content across email, messaging services, and web browsers.

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Keywords: Spam, Naive Bayes, NLP, Machine Learning, Fraud, Classifier.

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72 Shape Your Home: Interior Designing Application

Paper ID V10I1-1288 · Pages 440-446 · Information Technology

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This project offers a comprehensive solution for modernizing interior design methods by combining augmented reality (AR) technology with user-centric design concepts. The system has four major modules targeted at improving user experience and productivity in interior design projects. For starters, the AR-based object visualization and placement capability allows users to put virtual decor and furniture objects in their living areas in real-time. Allowing customers to experiment with various layouts and combinations improves design decisions. Second, the AR-based measuring module gives users precise measurements of room dimensions and furniture sizes, which helps with proper space planning and layout. Furthermore, the wall paint selection module includes a large number of colour palettes, allowing customers to try different paint colours on their walls before they are applied. Users may utilize this function to see the aesthetic impact of various colour schemes, allowing them to make more confident selections about wall colour. Finally, the application makes it easier for customers to communicate with interior designers and decorators, offering them a quick method to acquire expert advice and collaborate on projects. The project's goal in combining these modules is to allow users to release their creativity, streamline design procedures, and efficiently accomplish their ideal interior environments.

Keywords: AR Technology, Interior Design, Visualization, Wall Paint, Color Palettes, Precise Measurements, and Interior Designers.

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73 Blockchain-Based eVault for Legal Documents

Paper ID V10I1-1289 · Pages 447-451 · Blockchain

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Blockchain-based centralized file-sharing platforms are not capable of providing security and privacy to data which leads to an increase in security attacks, single points of failure, and censorship. As we know the

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digitization of legal documents has taken a rapid growth which results in the transformation of the legal industry and provided efficiency, accessibility, and security to a multitude of stakeholders. However, there is a need for a trusted and immutable system for storing, sharing, and verifying these documents remains a challenge. The paper is based on the concept of "Blockchain-Based eVault for Legal Documents," It leverages blockchain technology to address the issues of document authenticity, data security, and legal document management. The proposed eVault is designed to act as a secure repository for legal documents, offering a robust solution to the persistent challenges of document tampering, fraud, and unauthorized access. By utilizing blockchain technology, which provides decentralized, transparent, this eVault ensures the integrity or authenticity of legal documents.

Keywords: Blockchain, Smart Contracts, Decentralized File Sharing

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74 Marketing mix and strategic investment's role in business expansion: targetting sales maximization, diversification, and brand equity.

Paper ID V10I1-1290 · Pages 452-465 · Marketing

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The evolution of marketing has been noteworthy over the centuries. Marketing plays an essential role in determining the prosperity of a business. Achieving the targetted sales figures, expanding and diversifying your business, and creating your brand's equity depend upon strategically investing the available capital and simultaneously adopting the marketing strategies. This article formalizes a model that allows analysis of the present marketing mix. The detailed, descriptive, and surveyed research, also provides an idea to marketers and can be used as a tool to assist marketing strategies. Elucidates marketing, its traditional, and modern concepts, the difference between marketing and selling, to the explanation of the 7Ps, 4As, and 4Cs of Marketing. For further details, please read the research paper. Marketing Mix, SWOT Analysis, 4P, Value Investing, Growth Investing, Momentum Investing, Dollar – Cost Averaging

Keywords: Marketing Mix, SWOT Analysis, 4P, Value Investing, Growth Investing, Momentum Investing, Dollar – Cost Averaging

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75 Simulation of an Autonomous Robot Independently Lifting a Person in a Home Setting

Paper ID V10I1-1301 · Pages 466-471 · Computer Science And Human-computer Interaction

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Although different modifications have been added to enhance the quality of wheelchairs, the process of transferring in and out of a wheelchair can be exhausting and harmful: caregivers face a higher risk of injury when aiding their patients in doing so, and any slight change in lifting can cause severe injury for the patient. Other human-dependent robots for hospital use have been designed, but not independent or for home use. This paper outlines the simulation of an autonomous robot that can safely lift and carry a physically disabled person

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at home without depending on or risking the health of the caregiver. Upon the person requesting assistance by raising their hand, the robot travels to them. The robot determines the safest locations to place its arms in order to lift the person before carrying them to their destination. This autonomous robot thus serves as a personal assistant to provide wheelchair users a more comfortable transfer in and out of a wheelchair and throughout the house.

Keywords: Assistive Technology, Wheelchair, Human-Computer Interaction

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76 The Increasing Potential of AI in Businesses

Paper ID V10I1-1305 · Pages 472-476 · Business

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Modern digital conditions that keep changing require businesses to integrate Artificial Intelligence (AI). The essentiality of AI in businesses for competitive advantage and operational efficiency cannot be overemphasized. In this regard, this study explores how businesses are using AI as a tool for improved productivity, customer experience enhancement, decision making among other aspects that contribute towards their overall performance growth. Artificial intelligence is now changing the way we do business by enabling us handle massive quantities of data, automating processes and providing insights which can be acted upon. The paper also looks at how quickly AI technology has grown; this is clear from the fact that there has been an investment boom in AI tech and it's being adopted faster than ever before. Besides improving operational efficiency AI also helps in improving competitive advantage.

Keywords: Artificial Intelligence, Business, Growth, Technology

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77 Smart glove for Malayalam sign language recognition and audio output

Paper ID V10I1-1298 · Pages 477-484 · Computer Science

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Sign language, which is a medium of communication for deaf and mute people, uses manual communication and body language to convey meaning, as opposed to using sound. In this system, we are proposing a hand-wearable device by which deaf and mute people can communicate with normal people through the glove. The National Institute of Speech and Hearing (NISH) recently introduced Signs for Malayalam Alphabets. The Malayalam Sign Language alphabet is distinguished by this wearable system combining five flex sensors, a three -axis MPU sensor, an Arduino nano microcontroller, and a WiFi--BT--BLE MCU module. The glove tracks hand and finger movements through sensors, sending data via Wi-Fi to a mobile app that converts it into text and audio. The RTOS enables concurrent task management with deterministic timing, ensuring efficient

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operation of multiple functions like sensor data acquisition, gesture interpretation, and communication. The system emphasizes dataset creation for this newly formed sign language, training a model using Support Vector Machine (SVM) to recognize these signs, and integrating the model into a flutter application for ease of access.

Keywords: Malayalam Sign Language (MSL), Dataset, Support Vector Machine (SVM), Machine Learning, Real-Time Operating System, Sign Language Detection

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78 Design and Fabrication of agriculture sprayer and seed sowing machine

Paper ID V10I1-1232 · Pages 485-488 · Agriculture

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Recently in agricultural field, the growth of the plants is affected by harmful insects. This attacks mainly the outer layer of the plants. In order to reduce the attack various methods are employed. But in our project spraying equipment such as spraying nozzle, and pump are used. Here we implement a new idea for spraying insecticides and pesticides for plants and seed sowing. By using a Movable vehicle, we can easily operate the sprayer and seed sowing in required areas. This project consists of a semi-automatic vehicle, a water tank, a pump, battery, and motor. The ultimate objective of seed planting using sowing equipment is to achieve precise seed distribution within the row.

Keywords: Seed Sowing , Sprayer , Manual Drive System

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79 Online Auction System

Paper ID V10I1-1302 · Pages 489-492 · Computer Engineering

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The rapid evolution of digital technologies has transformed traditional auction methodologies into dynamic, online platforms. This abstract outlines the development and implementation of an innovative online auction system using the ASP.NET framework. The proposed system aims to provide users with an intuitive and responsive platform for conducting and participating in auctions, offering a seamless and engaging bidding experience. Leveraging ASP.NET's capabilities, the application ensures uniformity and high performance across various devices and operating systems. The development process involves utilizing ASP.NET's rich set of pre-built widgets, facilitating rapid prototyping and efficient UI design. Integration with backend services, employing technologies like Firebase or custom server solutions, ensures smooth data exchange and real-time

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synchronization. Furthermore, considerations for scalability, performance optimization, and user feedback mechanisms are integral to enhancing the overall user experience and system reliability. In conclusion, this online auction system built on the ASP.NET framework aims to redefine the auctioning landscape by offering a feature-rich, secure, and user-centric platform for both auctioneers and bidders, fostering a dynamic marketplace in the digital realm.

Keywords: Online Auction System, User Experience, Real-Time Bidding, Security, Scalability.

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80 The inception of “Group Theatre (GT) ” in India and Odisha

Paper ID V10I1-1297 · Pages 493-495 · Thestre

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Presently, "Group Theatre (GT) " of various States represents the mainstream theatre in India. There is hardly any Professional-Commercial Theatre. It has its history of inception in India and other states.

Keywords: IPTA, Bohurupee, Group Theatre, Commercial Theatre

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81 Social Entrepreneurship

Paper ID V10I1-1307 · Pages 496-501 · Social Responsibility

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Social entrepreneurship is a distinct form of entrepreneurship that addresses societal environmental issues. Despite challenges like limited resources and regulatory complexities, social entrepreneur remain committed to creating positive change. They employ strategies like such as problem- solving, collaboration community engagement, sustainability practices, advocacy and impact assessment. Female social entrepreneurs like Shiza Shahid, Rachel Brathen and Servane Mouzan have made significant contributions to societal progress and the empowerment of women globally.

Keywords: Small Business , Scalable Startup , Large Company , Social , Innovative , Intrapreneurship Adoptive Entrepreneurship , Passion , Visionary Thinking

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82 AI-based early intervention for adolescent suicidal ideation by detecting anxiety and depression.

Paper ID V10I1-1249 · Pages 502-506 · AI And Ml

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Depression is a mental illness that affects relationships. Early diagnosis is important for timely intervention and support. This article presents an approach to stress assessment using the power of artificial intelligence AI and multimedia. By integrating audio and video support into AI-based tools, we are revolutionizing the early depression detection process designed to increase user engagement and accessibility. We have introduced the best AI that not only provides appropriate questions but also adapts to user preferences for voice and video chat. This innovation encourages participation in psychological testing by recognizing the diversity of user needs and preferences. Through a rigorous process, we measure the impact of audio and video support on user engagement and overall device performance. Our studies show not only the positive results of multiple participation but also the positive effects of this approach in many aspects. We provide great results, including performance reviews, user recommendations, and in-depth reviews of performance tools. The findings highlight the importance of audio and video support in the early detection of depression, pointing to opportunities to improve user engagement and measurement accuracy. This article contributes to the use of health technology by providing new perspectives on early depression detection and user support. The combination of audio and video support promises to provide a more accessible and engaging approach to psychological assessment, opening new avenues for improving research and practice, mental health, and well-being. This summary, supplemented with audio and video, provides a brief overview of the project's focus, methods, key findings, and contribution to early childhood depression research. Depression is a mental illness that affects relationships.

Keywords: Machine Learning, Deep Learning, Electronic Health Records, Non-Clinical Methods, Automatic Detection CNN, DEPRA, SIGH-D.

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83 Optimizing Government Grants for Startups: Encouraging Growth of Technology Startups Within the U.S. Entrepreneurial Ecosystem

Paper ID V10I1-1304 · Pages 507-519 · Technology And Innovation Management

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The entrepreneurial landscape in the United States thrives on innovation, with tech startups playing a pivotal role in driving change and economic expansion. This article explores the symbiotic relationship between government grants and technology startups, examining the impact, challenges, and evolution of grant programs in fostering innovation. Beginning with a historical overview, it traces the trajectory of government support, highlighting milestones such as the Small Business Innovation Research (SBIR) program and legislative reforms. Through a comprehensive literature review, it evaluates the multifaceted impact of government grants on startup ecosystems, encompassing economic effects, innovation output, and spillover impacts. Moreover, it delves into the challenges faced by startups, including funding constraints, regulatory complexities, and market entry barriers, emphasizing the need for sector-specific tailoring of grant programs. The article concludes with an evaluation framework that scrutinizes procedural efficacy, outcome metrics, sector-specificity, and long-term sustainability, providing insights into enhancing the effectiveness of government grant initiatives for fostering technological innovation.

Keywords: Entrepreneurship, Innovation, Tech Startups, Government Grants, United States, SBIR, STTR, Economic Impact, Regulatory Challenges, Market Entry, Sector-Specific Support, Evaluation Framework, Long-Term Sustainability, Innovation Ecosystems, Funding Constraints, Policy Reforms.

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Volume 12, Issue 6 (November-December, 2026) is open for submissions. Last date: 31st December, 2026.

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