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Journal Abstracts

October 2025

Sl. No	Article	Author	Source	Year
1	The Optimization Development Model of Traditional Ethnic Sports with the Intelligent Particle Swarm Algorithm	*Zenan Xiong1, Wei Xiong1, Guojun Hong*	Journal Of Intelligent Computing Vol: 16 No: 1	2025

Abstract: This study aims to use the intelligent particle swarm algorithm to optimize the development model of traditional ethnic sports. By analysing the characteristics and problems of the development of conventional ethnic sports, combined with the advantages of the particle swarm algorithm, an optimization model was constructed, and an empirical study was carried out. The model for applying the particle swarm algorithm to optimize the development of traditional ethnic sports was proposed. In the model construction, the development problems of traditional ethnic sports were transformed into an optimization problem. Using the particle swarm algorithm's search and optimization capabilities, the model was solved, and the optimal decision scheme was obtained. The intelligent particle swarm algorithm can scientifically and effectively solve the problems faced by the development of traditional ethnic sports.

Sl. No	Article	Author	Source	Year
2	Building an Intelligent Education Model for Student Profiling Based on Big Data Algorithms	*Yubao Shen*	Journal Of Intelligent Computing Vol: 16 No: 1	2025

Abstract: The development of big data technology has driven the pace of teaching innovation and reform. In the information age, education emphasizes personalized and comprehensive development of students more than ever before. This paper combines big data algorithms to construct an intelligent education model for classroom student profiling. The model leverages big data mining algorithms to discover the correlations in student behaviour data. Using classification algorithms based on multi-frequency patterns, the model classifies student behaviour data and constructs multi-frequency pattern trees for students with different academic performance, reflecting differences in their learning behavior characteristics. Experimental results demonstrate that applying the intelligent education model based on big data algorithms can effectively provide teachers with comprehensive and accurate feedback on student behavior characteristics, helping students

understand them learning situations and enabling targeted personalized teaching, significantly improving students' learning quality and efficiency.

Sl. No	Article	Author	Source	Year
3	University Education Model and its Value of Cultivating Students in the Perspective of Education Considering Association Rules Algorithm	*Dongming Zhao, Xiaojie Ge*	Journal Of Intelligent Computing Vol: 16 No: 1	2025

Abstract: In today's higher education institutions, the development of "big ideology" has become essential. From a macro perspective, integrating "big ideology" into the classroom allows for better utilization of course resources and improves the classroom atmosphere. It also makes the curriculum more relevant to students' daily needs, thereby better cultivating their moral qualities. Therefore, this study explicitly analyses the university education model of nurturing students from the ideological and political education perspective, considering the association rules algorithm and its value. The study optimizes the association rules algorithm, drawing inspiration from the harmony search algorithm's main ideas, and introduces the concept of "self-learning" for students' improvement, thereby enhancing the overall search capability of the group and delving into the deficiencies in the analysis of students' existing course grades. The study proposes an association rules algorithm with self-learning capabilities, and the optimized performance of the association rules algorithm surpasses that of the function algorithm. The comparative results indicate that the optimization can achieve the ideal optimal solution of the reference function, and the proposed optimization significantly improves the computational performance of the rules algorithm. The algorithm's advantage increases considerably from 1000 rounds, and the network's lifetime extends to 1600 rounds. Through testing, it is found that applying association rules mining technology to analyze students' academic performance helps identify the relationship between course settings and course grades on the platform network, contributing to discovering essential information hidden in the network. Universities should actively explore the model of ideological and political education in practice and cultivate students, construct a "dual-platform and four-linkage" practical education model considering the association rules algorithm under the perspective of "big ideology," fully exert the value of ideological and political education in practice, and promote effective reform and progress of ideological and political education in universities.

Sl. No	Article	Author	Source	Year
4	The Combination of Red Tourism Policy Tools Based on K-Means Clustering Algorithm	*Gang Xu*	Journal Of Intelligent Computing Vol: 16 No: 1	2025

Abstract: Red tourism is a form of tourism with red tourist attractions and related historical culture as its theme. It is significant for promoting historical and cultural preservation and economic development of tourism. The configuration of the government's red tourism policy tool combination is crucial for developing red tourism. This study explores how to effectively configure the combination of red tourism policy tools to achieve sustainable development of red tourism based on the K-means clustering algorithm. Firstly, red tourist attractions are analyzed and clustered into different categories. Then, combining relevant historical and cultural data and tourism economic data, the K-means clustering algorithm is applied to optimize the configuration of red tourism policy tools. Through systematic research, we found that the configuration of red tourism policy tools using the K-means clustering algorithm can effectively meet the needs of different categories of red tourist attractions, thus promoting the sustainable development of red tourism. This research provides a valuable reference for the government and relevant tourism agencies in configuring red tourism policy tools

Sl. No	Article	Author	Source	Year
1	Analysis of Stability and Performance of Control Systems to Eliminate Noise	*Nils Vreman N, Anton Cervin N, Martina Maggio N*	Progress in Signals and Telecommunication Engineering Vol: 14 No: 1	2025

Abstract: Control systems are by design robust to various disturbances, ranging from noise to unmodelled dynamics. Recent work on the weakly hard model – applied to controllers – has shown that control tasks can also be inherently robust to deadline misses. However, existing exact analyses are limited to the stability of the closed-loop system. In this paper we show that stability is important but cannot be the only factor to determine whether the behaviour of a system is acceptable also under deadline misses. We focus on systems that experience bursts of deadline misses and, on their recovery, to normal operation. We apply the resulting comprehensive analysis (that includes both stability

and performance) to a Furuta pendulum, comparing simulated data and data obtained with the real plant. We further evaluate our analysis using a benchmark set composed of 133 systems, which is considered representative of industrial control plants. Our results show the handling of the control signal is an extremely important factor in the performance degradation that the controller experiences – a clear indication that only a stability test does not give enough indication about the robustness to deadline misses.

Sl. No	Article	Author	Source	Year
2	The Study of the Intricate Complexity-theoretic Landscape in a Stack Arrangement	*Thomas Depian, Simon D. Fink, Robert Ganian, Martin Nöllenburg*	Progress in Signals and Telecommunication Engineering Vol: 14 No: 1	2025

Abstract: An ℓ-page stack layout (also known as an ℓ-page book embedding) of a graph is a linear order of the vertex set together with a partition of the edge set into ℓ stacks (or pages), such that the endpoints of no two edges on the same stack alternate. We study the problem of extending a given partial ℓ-page stack layout into a complete one, which can be seen as a natural generalization of the classical NP-hard problem of computing a stack layout of an input graph from scratch. Given the inherent intractability of the problem, we focus on identifying tractable fragments through the refined lens of parameterized complexity analysis. Our results paint a detailed and surprisingly rich complexity-theoretic landscape of the problem which includes the identification of paraNP-hard, W [1]-hard and XP-tractable, as well as fixed-parameter tractable fragments of stack layout extension via a natural sequence of parameterizations.

Sl. No	Article	Author	Source	Year
3	Quadratic Algorithm of Periodic Tasks for Fixed-priority Scheduling	*Marc Boyer, Pierre Roux, Hugo Daigmorte, David Puechmaille*	Progress in Signals and Telecommunication Engineering Vol: 14 No: 1	2025
Abstract: Computing response times for resources shared by periodic workloads (tasks or data flows) can be very time consuming as it depends on the least common multiple of the periods. In a previous study, a quadratic algorithm was provided to upper bound the response time of a set of periodic tasks with a fixed-priority scheduling. This paper generalises this result by considering a rate-latency server and sporadic workloads and gives a response time and residual curve that can be used in other contexts. It also provides a formal proof in the Coq language.				

Sl. No	Article	Author	Source	Year
1	Error Correction Technology for Welding Robots Based on Three-Dimensional Visual Localization	*Jiangtao Zhang*	Transactions on Machine Design Vol: 13 No: 1	2025
Abstract: We have developed a novel welding robot through three-dimensional visual localization, which can promptly correct deviations in the welding seems position and shape, thus improving the welding accuracy. This new welding robot can better meet customer demands and complete complex manufacturing processes faster. After multiple experiments, we found that the welding seam error correction technology based on three- di- mensional visual localization significantly reduces welding errors, there by substantially improving product quality and accuracy. Therefore, we recommend adopting this new error correction technology to enhance product quality. This research significantly benefits welding technology improvement, helping us better control welding seams and accurately predict future variations. As a result, we can ensure superior product quality, safety, and reliability.				

Sl. No	Article	Author	Source	Year
2	Practical Evaluation Analysis of Intelligent Product Design Using Decision Tree Algorithm	*Beibei Wu*	Transactions on Machine Design Vol: 13 No: 1	2025

Abstract: the decision tree algorithm is an efficient machine learning technique that can help us better assess the practicality of intelligent products. This paper explores the basic principle if the decision tree algorithm and proposes a serious of effective evaluation methods combined with practical applications to achieve better results. Through experimental verification, the decision tree algorithm performs well in the practicality evolution of intelligent products and effetely addresses challenges in real world applications. therefore, the decision tree algorithm can serve as an effective tool to enhance the quality and competitiveness of product design for businesses.

Sl. No	Article	Author	Source	Year
3	Module Design Research of Distributed Electrical Control System	*Zhenguo Lu, Jing An, Xiaotao Li, Tiantao Song, Su Li*	Transactions on Machine Design Vol: 13 No: 1	2025

Abstract: this paper investigates the module design of distributed electrical control systems. In view of the current situation, the paper elaborates in the development history of distributed electrical control systems and analyses their advantages and disadvantages from multiple perspectives. A complete architecture is proposed to meet user requirements, which includes modular architecture, optimized communication protocols, and rational data transmission strategies, subsequently, each module's purpose and operation principles are explored, covering distributed control, data transmission, data acquisition, and other related modules. Finally, experimental verification is conducted, and the results demonstrate the feasibility and scalability of the proposed design. This research is of great significance In improving the performance and reliability of electrical control systems and provides valuable references for engineering practices in related fields

Sl. No	Article	Author	Source	Year
1	Challenges Faced in Transforming the Data in Fast Changing World Towards Meaningful Higher Education	*B.K. Arun, Uma Warrier, Suman Pathak.*	Journal of Information & Systems Management Vol: 15 No: 1	2025

Abstract: The present-day world is characterised by an increasing population and increasing interdependencies among nations. These increasing interdependencies have resulted in the need for improving bilateral and multilateral transactions, which have generated vast amounts of data. Further, the increasing interactions among people through multiple communication channels worldwide have resulted in an explosion of data. Since data is the raw material for getting meaningful and actionable information and recognising the differences in emerging patterns, constant association and sharing of the past, emerging and future data is essential to arrive at the hidden patterns of changing trends. Tracking the changing trends is very much crucial for making higher education meaningful in terms of character-building and developing relevant skills. The present work was taken up in this context and attempts in this direction by addressing the research question of 'what are the challenges in linking the phenomenon of flooding of data and transforming the same into meaningful information necessary for making our higher education system purposeful'. The research adopts the approach of multiple research methods, viz., collating experts' opinions through Delphi technique iterations, interviews with associated professionals, and a purposeful literature review. Based on the research, it was concluded that more interdisciplinary and trans-disciplinary interactions with open-mind are necessary to make the Indian higher education system more skill-oriented and sustainable. Based on the study, suggestions and recommendations were listed.

Sl. No	Article	Author	Source	Year
2	Impact of E-Learning Resources on Higher Education	*Y.M. Lokesh, H.N. Manjunath.*	Journal of Information & Systems Management Vol: 15 No: 1	2025

Abstract: The paper focuses on the understanding of e-learning, its advantages, the driving force behind e-learning, various forms of e-learning, essential characteristics of e-learning, how it is implemented and organised, the recent developments in technology, new methods in e-learning, quality assurance, and emerging policy issues. etc., are discussed in this section. Numerous other research artefacts are also discussed in this section of the presented thesis. In summary, the key objective of this chapter is to provide optimal knowledge transfer related to the research and allied variables. It can help readers or audiences to understand research requirements and allied information effectively.

Sl. No	Article	Author	Source	Year
3	Education in the Era of Artificial Intelligence (AI): Students' Attitude towards Using ChatGPT as a Learning Tool	*G. Veena, G.C. Varadaiah.*	Journal of Information & Systems Management Vol: 15 No: 1	2025

Abstract: The primary aim of this research study is to examine university students' opinions on using ChatGPT in learning. This study used a survey method for which a well-structured online questionnaire was designed to gather data from postgraduate students at Mangalore University. The findings showed that the primary purpose of 336 (87.5%) students using ChatGPT was to prepare for examinations, and 318 (82.8%) of them used ChatGPT to organise notes. About 322(83.9%) users 'Strongly agree' and 33(8.6%) 'Agree' with the statement 'I believe that using ChatGPT has increased the convenience of completing my academic tasks', followed by 302 (78.7%) of the students 'Agree' and 67(17.4%) 'Strongly agree' with the statement 'I believe that answers/responses from ChatGPT are reliable and accurate'. Data analysis discovered that students usually had positive feelings about using ChatGPT for learning.

Sl. No	Article	Author	Source	Year
4	Design of Course Analysis and Management System based on Decision Tree Algorithm	*Yang Liu, Hang Lv.*	Journal of Information & Systems Management Vol: 15 No: 1	2025

Abstract: With the development of technology, significant progress has been made in the informatization of higher education, and the management of games has greatly benefited from this progress. To better use this information, we propose a decision tree algorithm that can effectively analyse and manage games to improve the quality of physical education teaching. First, we delve into our data mining method - the C4.5 decision tree algorithm- and propose a complete course analysis, management system framework, and the corresponding database design. Then, we use ASP.NET as the development language, and with the support of SQL Server 2008 and Visual Studio 2010, we implement the system's functionalities. After testing, we find that the proposed games analysis and management system performs excellently in terms of runtime and accuracy, providing strong support for improving the efficiency and quality of game management.

Sl. No	Article	Author	Source	Year
1	Sustainability Practices in Libraries and Educational Institutions: Building a Resilient Future	*Jairaj Shanker*	Journal of Information & Systems Management Vol: 15 No: 2	2025

Abstract: In today's dynamic world, sustainability has become paramount across many sectors, including libraries and educational institutions. These entities, as hubs of knowledge dissemination and learning, play a crucial role in promoting and practicing sustainability. By implementing sustainable measures, libraries and educational institutions not only reduce their conservational footprint but also educate and inspire future generations on responsible environmental stewardship. This article explores the significance of sustainability in these contexts, highlighting environmental responsibility, educational impact, and economic benefits. Specific sustainable practices, such as energy efficiency, waste reduction, green building standards, and sustainable collection management, are explored, with illustrative examples from institutions like Harvard University and the University of British Columbia. Furthermore, the article addresses challenges such as funding constraints and cultural shifts, proposing strategies to bolster institutional commitment and effectiveness in sustainability initiatives. By

integrating sustainability in to operations and curricula, libraries and educational institutions can lead by example, fostering a sustainable future for all.

Sl. No	Article	Author	Source	Year
2	Empowering Rural Karnataka, India: The Integral Role of Public Libraries in Community Development	*Gururaj F Duragannavar, Meeramani N, Arunkumar H S.*	Journal of Information & Systems Management Vol: 15 No: 2	2025

Abstract: Public libraries play a pivotal role in fostering development and empowering rural communities in the state of Karnataka, India. This paper explores the multifaceted contributions of public libraries to rural development in Karnataka, elucidating their significance in education, information dissemination, cultural preservation, and socio-economic empowerment. Drawing on case studies, literature reviews, and empirical data, this study highlights how public libraries address the unique needs and challenges of rural communities in Karnataka. Additionally, the paper examines the challenges faced by public libraries in rural areas and proposes strategies for enhancing their effectiveness and reach. By recognizing the importance of public libraries and advocating for their support and expansion, this study aims to contribute to the advancement of rural development efforts in the state of Karnataka. Public libraries play an integral role in empowering rural communities in Karnataka. By fostering access to information, promoting lifelong learning, and serving as community hubs, libraries can be powerful catalysts for social, economic, and cultural development. By addressing the existing challenges and harnessing the potential of these institutions, we can empower rural communities and pave the way for a brighter future for Karnataka, India.

Sl. No	Article	Author	Source	Year
3	APT Utilisation of Library Resources in Lifelong Learning	*Basappa Y. Bangari, Dhanajaya Naik.*	Journal of Information & Systems Management Vol: 15 No: 2	2025

Abstract: This research paper explores the potential for effectively utilizing library resources to promote lifelong learning. Historically, in India, lifelong learning has been an integral part of education, especially during the Buddhist period, with ancient centres like Vikramashila, Takshashila, and Nalanda attracting learners around the world. However, the British education system adopted in India has shifted the focus towards earning degrees and certificates primarily for job qualification. True learning, especially of any subjects and languages including astronomy, astrology, logic and philosophy is a continuous process driven by a thirst for knowledge. Modern libraries are equipped to support lifelong learning, providing access to a vast array of resources including books, dictionaries, encyclopaedias, manuscripts, journals, and digital resources like eBooks, online journals, research papers, and unpublished materials. In addition to the platforms such as INFLIBNET, Shodhganga, Shodhagangothri, Shodh Prabha, and IGNOU e-content, the role of librarians and assistant librarians is crucial. These professionals should maintain wide and strong networks with intellectuals globally, including those in universities, research centres and individual experts. They assist knowledge seekers by understanding their needs and providing apt resources, including online support. This study employs descriptive and exploratory methods utilising secondary sources to analyse how library resources can be optimally used for lifelong learning. The research findings suggest that libraries play a vital role in facilitating continuous education, lifelong learning and intellectual growth worldwide.

Sl. No	Article	Author	Source	Year
4	Scholarly Publishing through Open Access: Challenges and Role of universities	*Chaithra G, Rekha D. Pai*	Journal of Information & Systems Management Vol: 15 No: 2	2025

Abstract: The Open Access (OA) publishing movement has changed the face of scholarly communication by supporting unrestricted access to research products. This study examines the concepts, types, benefits, problems, and future directions of OA publishing. Open access democratizes knowledge, boosts research visibility and impact accelerate scientific discovery, and addresses financial, quality, and sustainability concerns. How universities can support Open Access publishing is also explained.

Sl. No	Article	Author	Source	Year
1	Optimal Improvement of Voltage Fluctuation Caused by High Power Photovoltaic Systems Connected to the Electrical Power Grid	*Ahmed Abdulameer Kadhim*	I-Manager's Journal on Electrical Engineering Vol: 18 No: 3	2025

Abstract: The aim of this research was the optimal management of overvoltage in the photovoltaic system with the goal of maintaining voltage stability and reducing network losses. In the simulation process, a network with multiple buses and several scattered production sources was considered. These sources had varying generation capacities. Preliminary results indicated that system stability could be categorized as low, medium, or high depending on the distance between each bus and the scattered production sources. Buses located closer to the generation sources experienced minimal voltage oscillation, while those farther away showed greater fluctuations. This finding emphasized the importance of properly distributing generation to match network demand, particularly in areas where inconsistencies between production and demand led to power waste. The overvoltage levels of each distributed generation source were analysed at individual buses, and the data was used to assess requirements across the network. The optimal distribution was aligned with network consumption and demand, allowing effective compensation for observed power deficits in certain buses through power transfer from distributed sources. To develop an optimal management model for overvoltage distribution, efforts were made to establish equilibrium among network buses and generation sources. The buses were categorized into operational modes based on their distribution profiles, and each mode was assessed for efficiency in

overvoltage control. Results demonstrated that by selectively focusing on specific modes that excluded certain buses, network optimization could be improved. The findings highlighted the effectiveness of targeted overvoltage control strategies, especially in zones with higher instability.

Sl. No	Article	Author	Source	Year
2	Optimal Placement and Sizing of Renewable Energy Source-Based Generations in Transmission System	*Arnab Mukherjee, Jayanti Sarker*	I-Manager's Journal on Electrical Engineering Vol: 18 No: 3	2025

Abstract: The increased use of electricity in modern power systems is demanding the use of non-conventional energy sources to a large extent due to the limited stock of conventional energy sources. The present paper focuses on Gravitational Search Algorithm (GSA)-based optimal allocation and sizing of solar and wind power generating units in transmission systems. The performance of the optimization method has been tested on the IEEE-14 bus test system in terms of total generation cost minimization of conventional generating units, transmission line loss reduction, revenue earned from optimal generation of solar and wind power, and profit of non-conventional generating unit owners. The comparative study on the optimal installation of standalone solar, standalone wind, and a combined solar-wind system within the existing conventional transmission system has also been conducted to achieve better results.

Sl. No	Article	Author	Source	Year
3	Simulation of Four Quadrant Fuzzy Logic Controlled Matrix Converter Fed DC Motor	*Shiek Ruksana, Pavan Kumar Karedla, Sai Goutham K.*	I-Manager's Journal on Electrical Engineering Vol: 18 No: 3	2025

Abstract: This paper presents the concepts of a single-phase matrix converter as a universal converter for the four-quadrant operation of a DC motor. The Matrix converter is implemented as a rectifier, chopper, inverter and cyclo-converter for a high frequency step down has been

presented in this paper. This will reduce the need for a new or extra converter. The technique used for the implementation of the proposed topology was sinusoidal pulse width modulation technique. This paper verifies the four possible conversion processes say AC-DC, DC-DC, DC-AC and AC-AC from a high frequency input to the desired low frequency output by the single-phase matrix converter alone. The results of the four conversion topologies along with the filter has been presented in this paper. The proposed topology has been implemented in the MATLAB/SIMULINK software and the desired results for each of the converter topology has been verified.

Sl. No	Article	Author	Source	Year
4	Real-Time Monitoring and Control of Weaving Machines using PLC	*Imayavarman M, Indravarman M, Suthanthira Vanitha N, Radhika K.*	I-Manager's Journal on Electrical Engineering Vol: 18 No: 3	2025

Abstract: Weaving industries rely on precise and efficient operations to ensure high-quality output and minimal downtime. This article pays attention to implementing a real-time observation and management system for textile appliances using Programmable Logic Controllers (PLCs). The system integrates sensors, actuators, and communication interfaces to automate and optimize processes like spinning, weaving, and dyeing. Parameters such as temperature, pressure, speed, and machine conditions are continuously monitored to ensure predefined standards. Real-time data acquisition and control enable swift error detection and resolution, reducing downtime and improving production. Remote monitoring allows centralized control of multiple appliances and leverages industrial communication protocols for seamless data exchange. PLCs control essential parameters such as bearing rotation, temperature, and belt run duration in laundry machines. It calculates bearing values based on speed and belt rotation based on time, ensuring safety through DC links and automatic alarms for faults. We use supervisory Control and Data Acquisition (SCADA) for parameter monitoring. This system reduces human intervention, operational expenses, and wastage, while maintaining product quality, demonstrating PLC- based automation's potential to modernize textile industries with reliability and sustainability.

Sl. No	Article	Author	Source	Year
5	Electricity Theft Detection in Smart Grids Based on Deep Neural Network	*Gunda Sarath Kumar, Vepuri Krishnaveni, Pothuraju Chandu, Mohana Sai Lakshmi B. V, Makkena Mallikharjuna.*	I-Manager's Journal on Electrical Engineering Vol: 18 No: 3	2025

Abstract: Electrical theft is a global issue that harms both utility providers and electrical users. It destabilizes utility companies' economic development, creates electric dangers, and raises energy costs for customers. The development of smart grids is significant in power theft detection because they generate huge amounts of data, including consumer usage data, which may be used to detect electricity theft using machine learning and deep learning algorithms. This study introduces a deep neural network-based classification method for detecting theft that uses a lot of data in the time and frequency domains. Data interpolation and synthetic data creation procedures are applied to address dataset shortcomings such as missing values and class imbalance. The competitiveness of the proposed strategy is demonstrated in comparison with other methods evaluated on the same dataset. During validation, the approach achieves a 90% area under the curve (ROC), which is 1% higher than the best-performing DNN currently available, and an accuracy of 94.48%, the second highest on the benchmark.

Sl. No	Article	Author	Source	Year
1	Fostering Pro-Environmental Behavior: Pathways to a Sustainable Future	*Ismail Thamarasseri, Anitha M. K.*	I-Manager's Journal on Future Engineering and Technology Vol: 20 No: 2	2025

Abstract: Environmental or pro-environmental behavior is a critical area of interest in psychology, focusing on the factors influencing individuals' interactions with their environment. This study explores a conceptual framework that aids in understanding the diverse determinants of environmental behavior. Additionally, it presents a methodological approach to promoting environmentally responsible actions in practice. Human behaviours, whether minor or significant, have varying degrees of environmental impact, positive or negative. Since individuals are in constant interaction with their surroundings, all human activities can be considered environmental behaviors.

However, for academic and practical purposes, pro-environmental behavior is distinguished as intentional actions aimed at minimizing environmental harm and promoting sustainability. By examining the psychological, social, and structural factors that drive such behaviors, this study contributes to the discourse on fostering a more sustainable future.,

Sl. No	Article	Author	Source	Year
2	Exergy Destruction Investigation of Complex Gas Turbine Components	*Faraj El Sagier, Abdulgader A G Abdulrahem*	I-Manager's Journal on Future Engineering and Technology Vol: 20 No: 2	2025

Abstract: In Libya, simple gas turbine power plants are widely used for electrical power generation. However, this study examines complex configurations of the Brayton cycle, including the simple Brayton cycle, with intercooling, regeneration, and reheating, focusing on physical exergy destruction and its impact on specific fuel consumption and net power. The parameters are evaluated under the influence of the overall compression ratio, using selected turbine temperature and standard environmental conditions, with natural gas as the fuel. The results indicate that the combustion process is the primary source of exergy destruction, followed by the expansion stages with reheating, which contribute the next largest amount. In contrast, compression with intercooling results in the lowest exergy destruction across the overall compression ratio.

Sl. No	Article	Author	Source	Year
3	CFD Modeling of Blood Flow in Myeloid Sinusoidal Capillaries	*Matteo C. Orlando, Sayavur I. Bakhtiyarov*	I-Manager's Journal on Future Engineering and Technology Vol: 20 No: 2	2025

Abstract: The bone marrow microcirculatory system's present challenges for experimental investigation due to its complexity and limited accessibility. This study employs Computational Fluid Dynamics (CFD) to model blood flow within the myeloid sinusoidal capillaries of mice femur bone, focusing on velocity profiles, pressure distributions, and wall shear stresses. Using ANSYS Fluent 2023 R2, a detailed computational domain was developed from microscopic focus-stacked images, with a robust unstructured mesh applied for precise flow simulations. Blood was modeled as a multiphase Eulerian mixture, accounting for plasma and red blood cell dynamics. Results were validated against experimental data, showing a good agreement in velocity, volume fractions, and wall shear stress distributions. These findings underline the capability of CFD in providing detailed insights into microvascular blood flow, supporting future studies on hematological disorders and bone marrow mechanics.

Sl. No	Article	Author	Source	Year
4	Estimation of Ozone Dosage and Residual Ozone for Effective Wastewater Treatment.	*Kanipriya R, Udhayasuryan G.*	I-Manager's Journal on Future Engineering and Technology Vol: 20 No: 2	2025

Abstract: Ozonation has emerged as a promising technology for wastewater treatment due to its potent oxidizing properties, which enable the degradation of recalcitrant organic pollutants and improve effluent quality. This study explores the estimation method for the optimum ozone dosage and residual ozone for effective wastewater treatment and investigates its efficiency in reducing organic pollutants and improving treated effluent quality. The primary focus was on the effects of ozonation on Chemical Oxygen Demand (COD), Biochemical Oxygen Demand (BOD), color, and residual ozone concentrations. Ozone was generated using an ozone generator with a 5% concentration and applied to

wastewater samples for various contact times. The results revealed significant reductions in COD up to 42.9% and BOD up to 44%, demonstrating ozone's strong oxidative capability. Ozonation also led to an impressive 98% color removal. The study confirmed that ozonation is highly effective in achieving a superior level of disinfection, proving to be a sustainable technology capable of meeting stringent treated water quality standards. Further optimization of operational parameters can enhance the efficiency and cost-effectiveness of ozonation for large-scale wastewater treatment applications.

Sl. No	Article	Author	Source	Year
5	Brain Tumor Segmentation in 3D MRI Images using W-Net Architecture.	*Chandra Sekhar Sanaboina*	I-Manager's Journal on Future Engineering and Technology Vol: 20 No: 2	2025

Abstract: Segmenting the 3D MRI images by the computer to identify the brain tumors is a very critical and challenging task till the invention of the deep learning algorithms. The previous works used some traditional methods like Mathematical Morphological Reconstruction (MMR), superpixel-level features extracted from 3D volumetric MR images, ensemble approaches, CNN, U-Net, etc., to achieve enhanced accuracy in segmenting different tumor regions. This study presents an innovative 3D brain tumor segmentation method using an extended W-Net architecture, a derivative of U- Net, leveraging deep learning. Python programming on Google Colab facilitated the study, employing MRI scans from the BraTS dataset. The training dataset achieved a remarkable Dice Similarity Coefficient (DSC) and accuracy score of 0.98, showcasing the model's precision in tumor localization. The Matthews Correlation Coefficient (MCC) achieved 0.75, confirming the model's comprehensive segmentation quality. Generalization testing mirrored training outcomes, maintaining DSC and accuracy at 0.98, highlighting the model's robustness. The MCC, at 0.76, strengthened the model's ability to generalize to new data. This approach offers dependable and consistent segmentation outputs for 3-D brain MRI scans with tumor labels.

Sl. No	Article	Author	Source	Year
6	Future-Driven Approaches to Municipal Water Quality: Leveraging IoT, AI, and Advanced Purification Technologies for Sustainable Public Health.	*Eswaran, U., Ramalakshmi, Kiruthika, J. A., Umasakthisri, S., Keerthika, M., Pavani, P. D., and Vinothini, N.*	I-Manager's Journal on Future Engineering and Technology Vol: 20 No: 2	2025

Abstract: The future of municipal water quality management lies in the integration of cutting-edge technologies such as the Internet of Things (IoT), Artificial Intelligence (AI), and advanced water purification systems. These technologies have the potential to revolutionize the way water is monitored, treated, and distributed, ensuring its safety, accessibility, and sustainability. This paper explores the futuristic approaches to municipal water quality by discussing the current state of water quality management, emerging technologies, and their synergistic impact on public health. The focus is on the implementation of IoT and AI in real-time water quality monitoring, predictive analytics, and automated decision- making processes. Advanced water purification technologies, such as membrane filtration, UV treatment, and innovative AI-based systems, are also examined for their potential to improve the quality of municipal water and protect public health. Through a series of experiments, mathematical formulations, and case studies, the paper evaluates the effectiveness of these technologies in addressing the challenges of urban water pollution and ensuring safe, clean water for future generations.

Sl. No	Article	Author	Source	Year
7	Leveraging ConvLSTM and Satellite Imagery for Predictive Modeling of Floods, Landslides, and Earthquakes.	*Akash, R., Krishna, V. M., Priyans, R. V. A., and Vidhya, V.*	I-Manager's Journal on Future Engineering and Technology Vol: 20 No: 2	2025

Abstract: This study combines the spatial data from satellite imagery with the temporal learning capabilities of convolutional long short-term memory (ConvLSTM) networks to improve both prediction accuracy and processing efficiency. By utilizing diverse spectral bands and resolutions, the model captures a wide range of environmental features. Preprocessing steps, such as normalization and noise reduction, are applied to refine the input data and enhance the performance of the ConvLSTM network. The architecture is carefully structured to balance

spatial and temporal dependencies, ensuring the effective integration of satellite-derived data. The framework is optimized to identify complex relationships within the dataset, enabling precise forecasts of upcoming disasters. It has been tested on various natural events, including hurricanes, floods, and wildfires, achieving higher prediction accuracy and shorter lead times compared to traditional techniques. This integration of satellite imagery with ConvLSTM networks aims to strengthen early warning systems, improve disaster preparedness, and reduce economic and social damage to affected regions.

Sl. No	Article	Author	Source	Year
1	Accurate Screen Detection in Presentation Videos using Deep Learning.	*Purushotham , Kasarapu Ramani, C. Shobha Bindu*	I-Manager's Journal on Future Engineering and Technology Vol: 20 No: 3	2025

Abstract: Lecture videos are widely used in classroom and conference environments, where digital slides are frequently displayed on a screen, making screen detection essential for extracting slide areas from presentation videos. This study presents a method for identifying the position of slide areas in video frames by utilizing the You Only Look Once (YOLO) object detection framework. A tailored YOLOv7 model is trained using a labeled dataset that includes frames from presentation videos featuring projected slides. The trained model is subsequently evaluated on unfamiliar images to correctly identify projector screens. The dataset includes more than 2,000 labeled frames, which are increased to 5,000 images by using data augmentation methods. The suggested approach is assessed in comparison to other renowned object detection models. Experimental findings show that the customized YOLOv7 model attains superior accuracy and computational efficiency relative to the standard YOLOv7 and RetinaNet. The results indicate that this method provides a dependable solution for detecting projector screens and can be utilized in different real-world situations.

Sl. No	Article	Author	Source	Year
2	Smart Guide Visual Aid Glasses	*Suchitra Pandey , Vyom Jain, Prajjwal Phillip, Aayush Sharma*	I-Manager's Journal on Future Engineering and Technology Vol: 20 No: 3	2025

Abstract: Visually impaired individuals face significant challenges in recognizing objects, people, and text in their surroundings, often limiting their autonomy and independence. This study focuses on developing smart glasses equipped with Raspberry Pi to facilitate real-time object and facial recognition, supported by audio feedback. Utilizing advanced machine learning algorithms such as YOLOv5 for object detection and Dlib for facial recognition, the system delivers auditory cues through text-to-speech technology, allowing users to navigate their environment with enhanced confidence. The prototype's evaluation demonstrates its accuracy and usability while also discussing potential improvements for future development.

Sl. No	Article	Author	Source	Year
3	Nature Inspired Metaheuristic Effectiveness used in Phishing Intrusion Detection Systems with Grey Wolf Algorithm Techniques	*Hemanth Mangalapuri , Hemanth Mangalapuri*	I-Manager's Journal on Future Engineering and Technology Vol: 20 No: 3	2025

Abstract: Phishing attacks pose a severe cybersecurity threat, often bypassing traditional Intrusion Detection Systems (IDS) due to high false positives and low detection accuracy. This study enhances phishing detection by integrating nature-inspired metaheuristic algorithms with machine learning. Support Vector Machine (SVM) performance is optimized using Grey Wolf Optimizer (GWO), Firefly Algorithm, Bat Algorithm, and Whale Optimization Algorithm, mimicking natural behaviours for improved efficiency. Experimental evaluation shows that our model outperforms traditional methods, achieving over 95% detection accuracy while significantly reducing false positives, making it a more adaptive and intelligent phishing detection system.

Sl. No	Article	Author	Source	Year
4	Brain Tumor Diagnosis through CNN and LSTM	*Bogireddy Naga Sudha , Chekuri Sri Sai Sirisha, Karri Keerthi Sri, Kukkala Chaitanya Srinivas, T. Venkatakrishnamoorthy*	I-Manager's Journal on Future Engineering and Technology Vol: 20 No: 3	2025

Abstract: Medical diagnosis and treatment planning significantly depend on brain tumour classification processes to detect tumours early and develop appropriate therapies. The presented approach utilizes Convolutional Neural Networks (CNN) together with Long Short-Term Memory (LSTM) networks for classifying four categories of MRI brain scans, which include glioma and meningioma as well as pituitary tumour and no tumour. The trained model works on a pre-processed set that includes grayscale MRI images that received resizing and normalization procedures to reach better learning outcomes. Images produce spatial features through CNN evaluation, which pairs effectively with LSTM analysis that detects sequential patterns for better classification. The proposed network produces performance results matching or exceeding those of typical networks VGG16, ResNet50, and Efficient Net when evaluated with accuracy measurements along with confusion matrices and classification report metrics. The robustness is enhanced through data augmentation that includes Gaussian and salt-and-pepper noise application as well as noise reduction techniques to achieve better image quality. The model generates effective tumour classifications through high accuracy, which indicates its usefulness in automated brain tumour diagnosis.

Sl. No	Article	Author	Source	Year
5	Design and Development of an Optimized Underwater Forensic Robot Aimed at Enhancing the Detection of Submerged Human Remains.	*Allen Ditima*	I-Manager's Journal on Future Engineering and Technology Vol: 20 No: 3	2025

Abstract: Underwater forensic robotics has emerged as a transformative tool in the detection, location, and recovery of submerged human remains, addressing the limitations of traditional forensic methods in aquatic environments. This paper provides a comprehensive review of advancements in underwater forensic robotics, focusing on three key areas, design, optimization, and enhanced detection techniques. The

design of these robotic systems incorporates pressure- resistant materials, advanced sensors, and efficient power systems to ensure durability and performance in challenging underwater conditions. Remotely Operated Vehicles (ROVs), Autonomous Underwater Vehicles (AUVs), and hybrid systems are explored for their unique capabilities in forensic investigations. Optimization techniques, including sensor integration, navigation systems, and energy efficiency, are discussed to highlight improvements in operational effectiveness. Enhanced detection methods, such as 3D sonar imaging, chemical sensors, and AI-driven pattern recognition, are examined for their role in improving the accuracy and efficiency of locating human remains. Case studies demonstrate the successful application of these technologies in real-world scenarios, underscoring their practical significance. Despite these advancements, challenges such as environmental factors, technical limitations, and ethical considerations persist. Future directions include the development of Swarm robotics, Biomimetic designs, and interdisciplinary collaboration to further enhance the capabilities of underwater forensic robotics. This review underscores the critical role of robotics in advancing underwater forensics and highlights the need for continued innovation to address existing challenges and expand the potential applications of these technologies.

Sl. No	Article	Author	Source	Year
6	Reimagining Manufacturing with Generative AI: A Comprehensive Review of Current Applications and Future Directions.	*Harvinder Singh*	I-Manager's Journal on Future Engineering and Technology Vol: 20 No: 3	2025

Abstract: In recent years, the manufacturing industry has undergone transformative changes spurred by the rapid evolution of artificial intelligence (AI), particularly Generative AI (GenAI). As a subset of AI capable of creating new data from learned patterns, GenAI is poised to reshape manufacturing processes by enhancing productivity, product customization, quality assurance, and operational efficiency. This review synthesizes key findings from scholarly articles published in the first half of 2024, with a primary focus on three GenAI models: Generative Adversarial Networks (GANs), Variational Autoencoders (VAEs), and Transformer-Based Architectures. The paper critically analyses the roles and capabilities of GenAI technologies in improving predictive maintenance, supply chain optimization, and sustainable

production. It also sheds light on the prevailing challenges and potential future advancements of GenAI integration in industrial environments.

Sl. No	Article	Author	Source	Year
1	Alexithymia and the Co-Occurrence of Emotional-Related Disorders in Children and Young People Attending an Independent Specialist Educational School	*Robson Bagshaw, Emma Martin*	I-Manager's Journal on Educational Psychology Vol: 18 No: 3	2025

Abstract: This study investigated the size of the impact that emotion-related interventions had on the alexithymia scores of children and young people and the effectiveness of these interventions in an independent special school. Additionally, the aim was to understand the needs of young people in specialist educational provisions more holistically to gain a clearer understanding of their emotions and associated regulation. The aims were to see an improvement in alexithymia scores, a reduction in somatic complaints, and for students to be able to regulate their emotions with greater success. Students and staff from an independent special school were invited to complete an array of quantitative measures, which included the Alexithymia Questionnaire for Children (AQC), Somatic Complaints List (SCL), and Children's Alexithymia Measure (CAM) at baseline and post-intervention. It was hypothesized that there would be a significant positive difference in alexithymia scores and a reduction of somatic complaints from baseline to post-intervention. Overall, the results depicted positive steps were being taken through the emotion-related interventions in reducing alexithymia scores; however, the somatic complaints results were mixed.

Sl. No	Article	Author	Source	Year
2	Parent-Teacher Collaboration as a Catalyst for Enhancing the Educational Outcomes of Children with Autism Spectrum Disorder (ASD) in Inclusive Settings in Masvingo District, Zimbabwe.	*Peter Makaya*	I-Manager's Journal on Educational Psychology Vol: 18 No: 3	2025

Abstract: This qualitative study explores the dynamics of parent-teacher collaboration in supporting learners with autism in inclusive classrooms in Masvingo District. The study used a sample of 6 teachers and 6 parents. Through semi-structured interviews and focus groups, the research reveals that family-centered collaboration is a prevalent strategy, with both parents and teachers valuing its benefits. However, challenges such as denial, lack of time, and poor communication hinder effective collaboration. The study recommends comprehensive training, dedicated communication platforms, flexible collaboration arrangements, and a supportive environment to enhance parent-teacher collaboration. By addressing systemic barriers and prioritizing collaboration, schools can improve inclusive education practices, ultimately benefiting learners with autism. This research contributes to the understanding of parent-teacher collaboration in autism support, providing insights for educators, policymakers, and stakeholders seeking to enhance inclusive education in Zimbabwean schools.

Sl. No	Article	Author	Source	Year
3	Investigating the Factors Affecting Teacher Retention and Motivation in Bhutanese Schools: Insights from Former Teachers.	*Tashi Tshomo*	I-Manager's Journal on Educational Psychology Vol: 18 No: 3	2025

Abstract: teacher attrition, or the voluntary exit of teachers from the profession, is a global challenge that adversely impacts the efficacy of education systems. This study aims to explore the factors that influence bhutanese teachers' job satisfaction and career decisions and to propose some policy recommendations to address the issues surrounding teacher attrition in bhutan. The study adopts a qualitative approach based on the constructivist framework, employing semi-structured interviews with 25 teachers who left the profession within the last five years. Thematic analysis of the interview uncovered three primary factors, such as extensive workload, lack of recognition, and limited opportunities for professional development, as the leading causes for teacher attrition. Based on the findings, the study suggests some strategies to Improve

teacher retention and motivation, such as reducing teacher workload and stress, providing more recognition and support for teachers, and creating more opportunities for teacher learning and growth.

Sl. No	Article	Author	Source	Year
4	The Effect of Personality Differences in Coaching and Mentoring Practice.	*Adedayo Ogunleye*	I-Manager's Journal on Educational Psychology Vol: 18 No: 3	2025
Abstract: This study explored the influence of personality differences and their impact within coaching and mentoring relationships with the Big Five personality traits: Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism. For analysis, online surveys were conducted, and semi-structured interviews were carried out with 100 participants from various industries. Using a mixed-methods approach, levels of data representation and analysis were evaluated using Pearson correlation and multiple regression for the purpose of validation. The study found statistically significant differences in relationships, with personality traits having a profound impact. Openness, conscientiousness, extraversion, and agreeableness had a positive correlation with effectiveness, while the trait neuroticism had a negative impact. The compounded effect explained 68% of the variance in the effectiveness of coaching/mentoring. The findings provided insights into best practices for adding value in coaching and mentoring, with personalized approaches, effective communication, emotional support, trust building, flexibility, and continuous feedback identified as key factors. The findings also offer a comprehensive framework for understanding the relationship between personality differences and how they can enhance coaching and mentoring effectiveness, ultimately improving outcomes in both personal and professional contexts.				

Sl. No	Article	Author	Source	Year
5	The Impact of Learning Styles on Academic Performance in Adolescent Students.	*Puja Tripathi, Surendra Kumar*	I-Manager's Journal on Educational Psychology Vol: 18 No: 3	2025

Abstract: This study examines the relationship between learning styles such as visual, auditory, and kinesthetic and academic performance in adolescent students. The objective is to determine whether a student's dominant learning style significantly influences achievement across subjects. Data were collected from 200 high school students (ages 14-18) who completed the VARK learning style questionnaire. Academic performance was assessed using GPA and subject- specific grades in math, science, language arts, and physical education. The analysis reveals correlations between learning styles and success in specific subjects. Visual learners performed better in math and science, benefiting from diagrams and charts. Auditory learners excelled in language arts due to the verbal nature of instruction, while kinesthetic learners performed best in physical education, where movement-based learning is emphasized. However, overall GPA did not vary significantly by learning style, suggesting that factors such as motivation and study habits also influence academic success. These findings emphasize the importance of aligning teaching methods with students' learning preferences. While certain styles enhance performance in specific subjects, a multimodal teaching approach is recommended to optimize student engagement and learning outcomes. Educators and curriculum designers should integrate visual, auditory, and kinesthetic elements into teaching strategies to accommodate diverse learners. Further research is needed to explore how blended teaching methods incorporating multiple learning styles can enhance student success.

Sl. No	Article	Author	Source	Year
6	Impact of Collaborative Constructivist Teaching Methods on Enhancing Social Competence and Achievement of Secondary Students.	*Shakeela K, Rekha*	I-Manager's Journal on Educational Psychology Vol: 18 No: 3	2025

Abstract: Social competence refers to having the behaviors, social skills, and intellectual capabilities needed to thrive in society. This includes the capacity to create, nurture, and maintain social relationships in various areas of life. This study investigates the effect of the Collaborative Constructivist Approach (CCA) to teaching social science on developing social competence and achievement in social science. Emotional

maturity was considered as a covariate. The researcher selected two schools through a simple random sampling technique. The social competence scale of V.P. Sharma and Shukla and Shukla's emotional maturity scale by Yashvir Singh and Mahesh Bhargav, and the achievement test constructed and validated by the investigator were used. Descriptive statistics, including mean, median, mode, SD, and inferential statistics t-tests and ANCOVA, were used. The result reveals that the Collaborative Constructivist Approach is significantly more effective than the conventional method in fostering social competence and achievement in social science among secondary students.

Sl. No	Article	Author	Source	Year
1	Algorithmic Harmonies the Sounds of AI Composition	*Malumbo L Sichinga*	I-Manager's Journal on Software Engineering Vol: 19 No: 3	2025

Abstract: Algorithmic Harmonies introduces MUZIKOGEN, a cutting-edge AI-powered platform aimed at revolutionizing the way music is created and experienced. The system provides users with secure login and personalized experience, allowing access to a wide range of music genres, including pop, rock, Jazz, classical, hip-hop, and electronic. By harnessing advanced AI algorithms, MUZIKOGEN enables users to generate custom beats, lyrics, and vocals tailored to their chosen genre, catering to both novice and experienced musicians. The platform features an AI-driven Helper Bot that offers real- time assistance, enhancing the user experience with technical support, creative guidance, and feedback. Additionally, MUZIKOGEN serves as an educational tool by providing music tips to refine users' skills, fostering creativity and learning. By integrating secure authentication, AI-generated music, and interactive assistance, Algorithmic Harmonies aims to transform music production, making it accessible, enjoyable, and efficient for all.

Sl. No	Article	Author	Source	Year
2	Online Fraud Detection using Random Forest Algorithm	*Gunda Sarath Kumar, S. K. Hidayath, N. Naga Bindu, R. Vishnu Priya*	I-Manager's Journal on Software Engineering Vol: 19 No: 3	2025

Abstract: Online financial transactions have witnessed exponential growth in recent years, leading to a parallel rise in fraudulent activities across e-commerce and digital payment systems. To address this pressing issue, we propose a robust fraud detection framework that integrates machine learning and deep learning techniques, with a primary focus on Random Forest and ensemble-based architectures. Our approach includes comprehensive data preprocessing strategies such as label encoding, normalization, and handling class imbalance through the SMOTE technique. Furthermore, advanced feature extraction is performed using auto encoders and ResNeXt, followed by sequential learning with Gated Recurrent Units (GRUs) for temporal pattern recognition. The proposed model is evaluated using three benchmark datasets IEEE-CIS, PaySim, and the European card transaction dataset. Experimental results demonstrate that our method outperforms conventional models, achieving an accuracy of 96.0%, sensitivity of 99.8%, and specificity of 93.5%. The model not only enhances detection accuracy but also adapts effectively to evolving fraud patterns, making it suitable for real-time financial fraud prevention in diverse domains such as banking, e-commerce, and mobile transactions.

Sl. No	Article	Author	Source	Year
3	Price Pulse-An Intelligent Multi-Platform System for Real Time Price Tracking and Forecasting.	*Yogesh Joshi , Aman Soni, Tikendra Kumar, Potdar R. M.*	I-Manager's Journal on Software Engineering Vol: 19 No: 3	2025

Abstract: Price Pulse presents an intelligent, real-time price tracking system designed for dynamic e-commerce platforms such as Amazon, Flipkart, and Walmart. Leveraging headless browser automation and proxy rotation, the system bypasses modern anti-scraping defences including CAPTCHAs, IP bans, and JavaScript-heavy interfaces. Unlike traditional trackers, Price Pulse integrates predictive analytics using LSTM-based models to forecast price trends and alert users based on probabilistic price drops. The architecture consists of a React-based frontend, a robust Node.js backend with MongoDB, and a modular scraping engine using Playwright and Cheerio. Notifications are delivered

through both email and SMS for timely consumer awareness. Furthermore, the system is built with GDPR-compliant data handling practices and emphasizes ethical scraping standards. Experimental evaluation demonstrates high accuracy in price detection and forecasting, efficient alert generation, and strong system scalability. Price Pulse aims to empower consumers with actionable pricing insights while maintaining responsible data practices.

Sl. No	Article	Author	Source	Year
4	Development of a Web Based Smart Memory Aid for Alzheimer's Patients.	*Rajalaxmi S, Dharshan S, Kishorekumar T. M, Saheermohammed A. K, Priyadharshini B.*	I-Manager's Journal on Software Engineering Vol: 19 No: 3	2025

Abstract: This paper presents the development of a web based Smart Memory Aid designed to support individuals with Alzheimer's disease in managing their daily routines and cognitive well-being. The system integrates features such as music therapy, cognitive games, medication reminders, and caregiver monitoring, with the goal of enhancing independence and emotional health among users. Built using React, the platform emphasizes accessibility and user-friendliness, catering to the cognitive limitations and mobility challenges associated with Alzheimer's. The design process followed a user centered methodology, incorporating insights from caregivers and healthcare professionals. The final prototype was evaluated through pilot usability testing with a sample of patients and caregivers, with results indicating high levels of engagement and ease of use. This paper discusses the design rationale, implementation framework, and early feedback, offering a promising direction for future development in assistive technologies for neurodegenerative conditions.

Sl. No	Article	Author	Source	Year
5	Literature Survey on Design and Development of a Smart Traffic Management System using Object Detection.	*Gulrukh Nazneen, Aman Bhimte, Anadi Kantode, Adarsh Mishra, Abhishek Khushwaha, Dhruv Chandel*	I-Manager's Journal on Software Engineering Vol: 19 No: 3	2025

Abstract: Urban traffic congestion has emerged as a critical challenge due to rapid urbanization and increased vehicle density. Smart Traffic Management Systems (STMS), enhanced by artificial intelligence and object detection techniques, have shown promising potential in addressing these issues through real-time monitoring, adaptive signal control, and data- driven decision-making. This literature survey systematically reviews recent approaches in STMS design, focusing on the application of computer vision models such as YOLO (You Only Look Once), IoT infrastructure, cloud computing, and embedded systems. Key contributions of each system are analyzed in terms of traffic flow optimization, environmental impact reduction, cost-effectiveness, and emergency response capabilities. Additionally, the survey identifies common challenges such as sensor reliability, high deployment costs, scalability limitations, and cybersecurity concerns. By synthesizing findings across diverse methodologies, this paper highlights emerging trends and provides a comprehensive foundation for future research aimed at developing robust, scalable, and intelligent traffic management frameworks for smart cities.

Sl. No	Article	Author	Source	Year
1	Teachers' Perspectives on the Challenges and Opportunities of using Multimedia in English Language Teaching.	*Mutharasu G.*	I-Manager's Journal on English Language Teaching Vol: 15 No: 1	2025

Abstract: This study explores how multimedia tool integration in English language teaching (ELT) is becoming more common, presenting educators with opportunities and challenges. The viewpoints of ELT teachers on the use of multimedia in their teaching practices are explored in this qualitative study. This study attempts to provide nuanced insights into the experiences and attitudes of instructors from a variety of educational contexts through in-depth interviews with a purposeful sample of these educators. Strong technical support systems specialized professional development programs catered to the needs of educators, and the establishment of cooperative forums for exchanging best

practices are among the recommendations. Through the implementation of multimedia resources, instructors can enhance the efficacy of their instruction and provide English language learners with a more enriching learning experience. Teachers identified challenges such as technological barriers and the need for professional development yet acknowledged opportunities in enhancing learning experiences through visual and interactive materials.

Sl. No	Article	Author	Source	Year
2	Enhancing Cognitive Development in Educational Contexts: The Impact of Wordplay on English Creative Writing.	*Zahra Sadat Roozafzai , Parinaz Rahimi Hosseinabadi*	I-Manager's Journal on English Language Teaching Vol: 15 No: 1	2025

Abstract: This study explored the impact of integrating wordplay techniques in educational contexts on cognitive development and English creative writing skills using a pre- and post-test design. 160 students from diverse linguistic backgrounds participated, assigned to either an experimental or control group. The control group followed the Standard English Creative Writing Curriculum, while the experimental groups focused on puns, alliteration, or metaphors. Pre-tests and post-tests assessed students creative writing skills, with additional qualitative data gathered through interviews and surveys. Quantitative analysis using ANOVA revealed significant improvements in creative writing skills for all three experimental groups compared to the control group, with the group focused on puns showing the greatest improvement. Qualitative analysis identified themes of improved problem-solving abilities, critical thinking skills, and engagement in creative writing among experimental groups. This study highlights the potential benefits of incorporating wordplay activities into English creative writing classes for English learners, emphasizing the importance of tailoring teaching methods to promote language proficiency and foster creativity. Wordplay can effectively stimulate learners' critical thinking, problem-solving, and creativity, enriching their overall English language use.

Sl. No	Article	Author	Source	Year
3	A Comparative Analysis of Student Perceptions of English Language Programs in Japan and India: Effectiveness, Satisfaction, Confide nce, Support, and Recommendation.	*Saranyaraja Muthumaniraja, Payal Khurana, Divyabha Vashisht*	I-Manager's Journal on English Language Teaching Vol: 15 No: 1	2025

Abstract: This study examines student perceptions of English language programs in Japan and India, focusing on five dimensions that are effectiveness, satisfaction, confidence, support, and recommendation. Using a comparative framework, the study analyzed data from 127 participants across both countries through descriptive and inferential statistical methods, including Mann-Whitney U tests. The results reveal significant differences in perceived program effectiveness, with Japanese participants rating programs higher, reflecting their preference for structured, teacher-led approaches. Satisfaction, confidence, support, and recommendation ratings were comparable between the two groups, indicating general program success. These findings underscore the importance of culturally informed program design in enhancing educational outcomes. The study contributes to cross-cultural education by providing insights into how cultural and contextual factors shape perceptions of language programs. It highlights the need for interactive learning strategies to enhance confidence and practical language use. Future studies could explore qualitative insights to uncover nuanced cultural influences on program perceptions and outcomes. The findings have implications for educators and policymakers in designing adaptive and impactful language learning initiatives.

Sl. No	Article	Author	Source	Year
4	Learning Vocabulary through Concordancing vs. ChatGPT; Machine or AI?	*Hadi Heidari*	I-Manager's Journal on English Language Teaching Vol: 15 No: 1	2025

Abstract: Through the advent of the technology, using ChatGPT on vocabulary acquisition has become popular among language learners. The current study tries to explore the efficacy of ChatGPT on vocabulary acquisition by comparing it with some pre-established and effective ways to learn vocabulary, like concordance-based vocabulary acquisition methods. The study involved 60 students, all of whom took a proficiency test to ensure an intermediate level of language proficiency before participating. Students were then randomly assigned to one of three groups:

traditional, concordance-based, or ChatGPT-assisted, with 20 students in each group. This study utilized a mixed-methods design at two phases of comparing three groups learning vocabulary (traditional approach, concordance-based approach, and ChatGPT-based approach). Additionally, qualitative research was conducted to gain insights into students' perceptions, with the studies serving as the teacher for all three groups. Quantitative data were analyzed using statistical methods such as descriptive statistics and ANOVA. Qualitative data were analyzed using thematic analysis to uncover recurring themes and valuable insights from participants' responses. The findings highlight the positive implications of ChatGPT over concordances and their subsequent supremacy over traditional methods on vocabulary development. According to this study, using technologies, including ChatGPT and concordances, makes it possible to develop lexical competence, with methodological, cognitive, and affective benefits for EFL learners, thus offering significant contributions to the field of vocabulary acquisition. Future research should continue to explore the nuances of ChatGPT and concordancing in various educational contexts to further refine its application in vocabulary learning.

Sl. No	Article	Author	Source	Year
5	Designing Instructional Materials using Animated Movies as Resources for Intentional Vocabulary Learning.	*Teenesh Kumaravel S, Sindhu Vasu, Gadha M. R.*	I-Manager's Journal on English Language Teaching Vol: 15 No: 1	2025

Abstract: English is essential for communication across various contexts, including social interactions and formal discussions. However, learners from rural backgrounds or non-English educational mediums struggle to meet the linguistic demands of higher education. English proficiency not only aids knowledge acquisition but also enhances communication skills. Mastery of English as a second language requires understanding both linguistic and communicative aspects, particularly vocabulary acquisition. Effective vocabulary instruction involves teaching word meaning, pronunciation, and spelling in engaging ways to sustain learner interest. Traditional methods, such as rote memorization and word lists, fail to maintain student engagement. In contrast, intentional vocabulary learning through engaging and contextually relevant materials enhances retention. This study proposes a learner-centric lesson plan for teaching vocabulary in ESL classrooms using animated movies as instructional aids. Video clips from selected films serve as engaging tools to present new words in meaningful contexts, capturing learners' attention and facilitating intentional vocabulary learning. The study designs lessons incorporating

exercises that help students learn word meanings, spelling, and pronunciation while simultaneously familiarizing them with vocabulary in real-world contexts. Additionally, these exercises assess students' vocabulary knowledge and support learner-centered instructional approaches. By integrating animated films, the study aims to enhance vocabulary acquisition in an interactive and engaging manner. The proposed lesson plans offer an alternative to traditional teaching methods, fostering improved language proficiency among ESL learners.

Sl. No	Article	Author	Source	Year
6	Enhancing English Language Proficiency through Dr. Seuss: Integrating Literature, Technology, and Culturally Responsive Teaching in ELT.	*Jinsha Johnson, Sindhu K.*	I-Manager's Journal on English Language Teaching Vol: 15 No: 1	2025

Abstract: Teaching English through literature offers a dynamic approach to language acquisition, and Dr. Seuss's whimsical narratives and playful language present unique opportunities to enhance English language proficiency among young learners. This study explores the integration of Dr. Seuss's literature into English Language Teaching (ELT), focusing on linguistic development, culturally responsive teaching, and the use of technological advancements. The method involves analyzing how texts like The Cat in the Hat, Fox in Socks, On Beyond Zebra!, Green Eggs and Ham, and The Cat in the Hat Comes Back can support language learning through their rhythmic and repetitive structures. The objective is to demonstrate how these works can overcome barriers to English proficiency by fostering phonemic awareness, vocabulary acquisition, and comprehension skills. Additionally, incorporating technology such as digital storytelling platforms, interactive e-books, and educational apps enhances engagement and communicative competence. The study also addresses challenges like limited vocabulary and comprehension difficulties, offering strategies such as preteaching vocabulary, using visual aids, and engaging students in creative activities. By leveraging Dr. Seuss's texts, educators can create an inclusive and enjoyable learning environment that promotes linguistic development and a love for reading. This multifaceted approach underscores the enduring value of authentic literature in children's education and its potential to make language learning an engaging and effective endeavor.

Sl. No	Article	Author	Source	Year
1	Foreign Language Anxiety in the Classroom: A Comprehensive Exploration.	*Adam Crosby*	I-Manager's Journal on English Language Teaching Vol: 15 No: 2	2025

Abstract: Foreign language anxiety (FLA) is a well-established phenomenon that significantly impacts language learners across various educational contexts. This paper offers a comprehensive exploration of FLA, examining its causes, manifestations, and consequences in the classroom. The study highlights the psychological and emotional dimensions of FLA, identifying the key components: communication apprehension, test anxiety, and fear of negative evaluation. It also discusses the influence of cultural and interpersonal differences and personality traits on the intensity of anxiety experienced by learners. The role of teachers in mitigating FLA through supportive and empathetic classroom environments is emphasized, along with strategies such as task-based learning and peer feedback. Furthermore, the paper critiques the limitations of existing tools, like the Foreign Language Classroom Anxiety Scale (FLCAS), and proposes alternative approaches for assessing FLA. Finally, suggestions for future research are provided, focusing on longitudinal studies, the role of technology, and the refinement of assessment tools to enhance our understanding of FLA and improve language acquisition outcomes. By addressing FLA in a nuanced manner, educators can create a more conducive environment for language learning, fostering both linguistic and emotional growth.

Sl. No	Article	Author	Source	Year
2	integrating Green ELT Practices and the UN Sustainable Development Goals in English Language Teaching: Addressing Climate Anxiety and Promoting Social Responsibility.	*Kashmi Mondal, Sheeba Khalid.*	I-Manager's Journal on English Language Teaching Vol: 15 No: 2	2025

Abstract: This research explores the role of Green English Language Teaching (ELT) in addressing pressing global environmental issues and climate change within the classroom. It investigates how incorporating environmental topics and the UN Sustainable Development Goals (SDGs) into ELT curriculum can equip learners with the skills necessary to engage with critical global challenges. The study further delves into

the psychological impacts of climate anxiety among learners and how Green ELT can act as a tool for social responsibility, fostering an awareness of sustainable development, preserving natural habitats, and promoting global education for a more equitable future. Through the examination of initiatives like ELT Footprint, Renewable English, and Green Action ELT, the paper aims to propose effective pedagogical strategies for integrating green issues into ELT and building a more sustainable, climate-conscious generation.

Sl. No	Article	Author	Source	Year
3	Mobile Assisted Language Learning (Technology Integration in English Language Classrooms).	*Suma Bindu Pothuri, Amit Kumar*	I-Manager's Journal on English Language Teaching Vol: 15 No: 2	2025

Abstract: In the world of digitalization, the importance of English language education has its own pivotal space. Compared to other languages in the world, the English language is considered an international language either to get an admission into various universities through international tests or for better communication in enhancing one's career ladder. The learners have better access to learning the English language through the best source, called Mobile Assisted Language Learning (MALL), which is one of the latest usages and is being touted as one of the best, easiest, and most interesting options for learning a language for the last decade in India. This paper aims to investigate the effectiveness of MALL in enhancing the speaking skills of language learners, besides providing personalized learning with instructions and feedback to language learners. The usage of technology in MALL mediates in enhancing language learners' oral proficiency and develops and evaluates new MALL tools and materials that could be implemented for improving language learners' speaking skills. The paper aims at assessing the impact of MALL on language learners' speaking skills by focusing on prioritizing and developing accuracy and fluency, diction, pronunciation, and one's comprehensive skills so as to investigate the effectiveness of different types of MALL activities and software related to it.

Sl. No	Article	Author	Source	Year
4	Reimagining Literature through AI: Subjective Interpretations and Technological Innovations.	*Jijeesh T. K*	I-Manager's Journal on English Language Teaching Vol: 15 No: 2	2025

Abstract: The growing power of computational algorithms, including AI, has brought the scientific process into a new phase, making democratization broadly usable by both humans and machines. This study addresses the convergence of AI technology and literary analysis, examining how AI may offer new approaches to analyzing literature. Traditional literary criticism heavily depends on human subjectivity, which is constrained by individual biases and human cognition limitations. AI, with its ability to analyze large data sets and detect patterns beyond human perception, offers an opportunity to supplement and enhance traditional methods. This study explores AI techniques, including natural language processing and machine learning algorithms, for analyzing literary texts. The goal is to identify patterns, themes, and structures that human critics may miss. It also examines the implications of AI-generated interpretations on the subjective nature of literature, questioning whether machine interpretations can be considered valid and how they influence our understanding of texts. Incorporating AI into literary studies presents challenges, including the need for algorithm transparency and the potential lack of human sentiment in literary evaluation. This study advocates for a collaborative approach, using AI as a supplementary tool for literary scholars to navigate challenges and enhance their analysis. The objective of this paper is to demonstrate how technological advancements can offer new perspectives, enriching literary studies and broadening the scope of interpretation in the digital age.

Sl. No	Article	Author	Source	Year
5	Effectiveness of Creating Awareness about English Language Skills and Learning Strategies to Enhance Listening Competence of ESL Learners in Rural Government Colleges in Tamil Nadu – A Primary Research Study.	*Gali Christu Raj, Ramesh Govindarajan, Justin James, Lalitha Justin*	I-Manager's Journal on English Language Teaching Vol: 15 No: 2	2025

Abstract: This study investigates the effectiveness of a comprehensive intervention aimed at improving the listening skills of English as a Second Language (ESL) learners in rural government colleges in Tamil Nadu, India. It addresses the rural students' barriers to developing communicative competence, especially in listening, through awareness-building sessions, teacher training programs, and establishing an English club. A mixed-method approach, including pre- and post- intervention tests, was used to assess the impact of the intervention. Although a minimal improvement across most groups was found, some students in specific groups with targeted support showed significant development. It also highlights the importance of addressing the unique challenges rural learners face. Those challenges include limited access to resources and insufficient teacher training. The research recommendations demand the implementation of refined intervention strategies, technology integration, and the expansion of the duration of intervention programs to ensure the desired impact. It emphasizes the need for a scalable and adaptable model for improving English language proficiency in rural areas.

Sl. No	Article	Author	Source	Year
6	Phonological Instruction in 'Mastering English: High School' and its Suitability for Advanced Level English Language Learners in Cameroon.	*Diangha Anthony Yuh*	I-Manager's Journal on English Language Teaching Vol: 15 No: 2	2025

Abstract: The revised syllabus for Advanced Level English (ENG 0730) in Cameroon prioritizes the development of communicative competence through effective instruction in English phonology, as outlined in the "Speech Work" component. However, a critical evaluation of Mastering English: High School reveals significant misalignments with the principles of the Competence-Based Approach (CBA) and the unique phonological challenges faced by Cameroonian learners. This study examines the breadth and depth of phonological topics in the textbook,

the accuracy of phonemic representation, the contextual relevance of vocabulary, and the integration of communicative practice opportunities. Findings indicate that while some lessons provide basic coverage of segmental features, there are substantial gaps in the treatment of suprasegmental aspects such as stress, rhythm, and intonation, inaccuracies in phonemic descriptions, and a lack of learner-centered, communicative activities. These shortcomings undermine the textbook's capacity to foster the development of communicative competence among learners. The study proposes targeted revisions of the textbook, including the integration of contextually relevant vocabulary, task-based activities, and differentiated instruction. Additionally, teacher professional development and curriculum alignment with the GCE Advanced Level English syllabus are recommended to enhance the quality and relevance of phonological instruction. These measures aim to equip Cameroonian learners with the phonological skills necessary for intelligible communication in academic and professional contexts.

Sl. No	Article	Author	Source	Year
7	vestigating Vocabulary Learning Difficulties of Rural ESL Secondary School Learners.	*Raju Dhuli, Rajakumar Guduru*	I-Manager's Journal on English Language Teaching Vol: 15 No: 2	2025

Abstract: Vocabulary development significantly contributes to language proficiency, yet the journey of acquiring new words poses substantial challenges, particularly for English as a Second Language (ESL) learners. The objective of this study is to examine the particular difficulties encountered by ESL learners in acquiring new vocabulary and to gain insights into the root causes of these challenges. Additionally, the study seeks to explore effective targeted interventions that ESL teachers can employ to mitigate these difficulties. The study includes 520 ninth-grade students consisting of 315 boys and 205 girls from five government rural secondary schools, along with ten ESL teachers. To identify vocabulary learning difficulties, the facilitator administered a vocabulary learning difficulties questionnaire to students. Additionally, semi-structured interviews were conducted with teachers to understand the underlying reasons for these difficulties. Using SPSS version 28, the researcher analyzed quantitative data, and thematic analysis was employed to analyze the qualitative data. The analysis revealed various difficulties in vocabulary learning, including difficulties in pronunciation, contextual usage, grammar comprehension, understanding homophones, homonyms, and homographs, spelling complex words, using collocates, phrasal words, and idioms, and memorization and

translation issues. Interviews with teachers identified limited exposure to English, ineffective classroom instruction, lack of opportunities in vocabulary learning activities, and insufficient opportunities for reading and writing practice in English as primary reasons for vocabulary difficulties. The findings of the study offer valuable insights for ELT material developers, educational institutions, and language instructors aiming to alleviate vocabulary learning challenges.

Sl. No	Article	Author	Source	Year
1	Carbon Capture Analysis on Ternary Complexes Containing an Aminopenicillin Drug and Imidazole Derivatives.	*Regupathy S.,* *Sachin Pradeep Singh C.*	I-Manager's Journal on Chemical Sciences Vol: 5 No: 1	2025

Abstract: The continuous release of carbon dioxide into the atmosphere will definitely cause damage to the environment. Environmental protection and reducing global warming are becoming very essential. The concentration of carbon dioxide in the atmosphere is due to the continuous burning of fossil fuels to attain the energy requirements. A novel method of adsorbing the most important greenhouse gas, carbon dioxide, using some ternary complex materials capable of adsorbing the gases effectively was studied. A ternary complex system with Zn (II) metal ion chelated with ampicillin (A) as the primary ligand and imidazole derivatives him/hist/his (B) as the secondary ligands ZnAB(B=hist/his)/ZnAB2 (B=him) species in all these systems were isolated, and the analytical data confirm its formation. Non-electrolytic behavior and monomeric types of chelates have been assessed from their low conductance values. The vibrational spectral data were interpreted to find the mode of binding of ligands to metal. The powder XRD and SEM analysis of the complexes suggest a nanocrystalline nature. The AFM images of selected complexes suggest mesoporous morphology, which has a higher tendency of adsorbing carbon dioxide gas. The ternary complexes exhibited surface areas ranging from 3.15 to 18.42 m^2/g, with pore volumes of 0.004–0.008 cm^3/g and average pore diameters of 5.8–2.6 nm. An excellent carbon dioxide uptake (20–38 wt%) was achieved at high temperature and pressure (303 K and 40 bar, respectively) using the ternary complexes. The ZnAB (B=his) ternary complex material exhibited the highest carbon dioxide uptake (38 wt%) due to its higher surface area and pore volume compared with the other two ternary complexes.

Sl. No	Article	Author	Source	Year
2	Breaking Zeolite Boundaries through Synthesis and Structural Evolution of IPC-9 and IPC-10 via the ADOR Mechanism.	*Sophie Barrow*	I-Manager's Journal on Chemical Sciences Vol: 5 No: 1	2025

Abstract: The synthesis of predicted but traditionally unfeasible zeolite frameworks remain a formidable challenge due to kinetic limitations inherent in solvothermal methods. This study presents a successful synthesis of two novel zeolites, IPC-9 and IPC-10, using the ADOR (Assembly–Disassembly–Organization–Reassembly) strategy applied to the layered precursor IPC-1P. The interlamellar space of IPC-1P was modified via controlled intercalation of organic cations such as choline hydroxide and diethyl dimethylammonium, followed by direct condensation and alkoxysilylation to yield IPC-9 and IPC- 10, respectively. Structural characterization confirmed the presence of unique odd-member ring systems (10-7 and 12- 9), unprecedented in known zeolite frameworks. Surface analysis revealed BET areas of 128 m^2/g for IPC-9 and 217 m^2/g for IPC-10, affirming their porous nature. High-resolution TEM and Rietveld refinement matched the experimental results to predicted models, validating the targeted topologies. These findings offer direct evidence that theoretical zeolite structures, previously deemed unfeasible due to framework energy and local interatomic distance constraints, can be realized through strategic post-synthetic modifications. This work not only challenges the conventional feasibility criteria but also expands the synthetic scope for future zeolite discovery.

Sl. No	Article	Author	Source	Year
3	Sustainable Nanotechnology for Water Softening: Role of Green – Synthesized Cobalt Oxide Nanoparticles in Reducing Total Hardness.	*Ginu Rose C, Amaliya N. K.*	I-Manager's Journal on Chemical Sciences Vol: 5 No: 1	2025

Abstract: Water hardness, primarily caused by the presence of calcium (Ca2+) and magnesium (Mg2+) ions, presents significant challenges in domestic and industrial water use. Traditional water softening methods involve chemical treatments that are costly, environmentally harmful, or inefficient. This study explores a sustainable and eco-friendly approach to water softening through the green synthesis of cobalt oxide (Co3O4) nanoparticles. The synthesized nanoparticles were characterized using X-ray diffraction (XRD), Fourier-transform infrared

spectroscopy (FTIR), and transmission electron microscopy (TEM) analysis to confirm their morphology, crystalline structure, functional groups, and surface properties. Batch adsorption experiments were conducted to evaluate the nanoparticles' efficiency in removing Ca2+ and Mg2+ ions from artificially and naturally hardened water samples. The effects of contact time, pH, adsorbent dose, and initial ion concentration were systematically studied. Results demonstrated high removal efficiency (>90%) under optimized conditions. Furthermore, the material exhibited good reusability over multiple adsorption-desorption cycles with minimal loss in performance. The findings highlight the potential of green-synthesized Co3O4 nanoparticles as a sustainable alternative for water softening applications. This approach not only addresses the issue of water hardness but also supports the development of low-cost, environmentally friendly nanomaterials for water purification technologies.

Sl. No	Article	Author	Source	Year
4	Lithium Extraction from Hard Rock Concentrates: A Comprehensive Review of Sulfuric Acid and Potassium Sulfate Roasting Method.	*Farai Katsande, Anthony Phiri, Tanaka D Dzapasi, Mufaro.S Nyambara*	I-Manager's Journal on Chemical Sciences Vol: 5 No: 1	2025

Abstract: The rapid increase in lithium demand, driven by its critical role in battery technologies, requires efficient and cost- effective extraction methods from hard rock concentrates like spodumene. This review comprehensively evaluates lithium extraction processes, with a particular focus on sulfuric acid roasting and potassium sulfate roasting methods. Detailed insights into the chemistry, process parameters, environmental impact, and economic feasibility of these techniques are presented. By highlighting the advantages, limitations, and industrial applications of each method, this article provides a framework for optimizing lithium recovery from hard rock concentrates.

Sl. No	Article	Author	Source	Year
5	Review on Cellulose Extraction Techniques for Potential Application in Hydrogel	*Elizabeth Ticharw, Fred M. Saziya, Manyangadze Milton, Lee Moyo, Joseph Govha, Ossias N. Maliyon, Munashe Madodo*	I-Manager's Journal on Chemical Sciences Vol: 5 No: 1	2025

Abstract: The urgent need for sustainable agricultural inputs has spurred interest in biopolymers such as cellulose-derived hydrogels for slow-release fertilizers (SRFs). This review evaluates different cellulose extraction techniques from corn cobs- an abundantly available agro-waste to assess their potential for hydrogel synthesis. Chemical, physical, biological and combined methods were analyzed, with focus on yield, cellulose purity, structural integrity, and environmental footprint While conventional methods like acid and alkali treatments are effective, they pose significant environmental issues due to use of heavy chemicals. In contrast, methods like microwave-aided and ultrasound-aided chemical extractions, green solvent setups and other combined treatment methods provide hopeful paths toward yielding cellulose possessing good traits for use as hydrogel precursor material.

Sl. No	Article	Author	Source	Year
1	Harmonise the Open Access to Scholarly Communication	*Veda L Shetty, Yashashwini. H L*	International Journal of Information Studies Vol: 17 No: 1	2025

Abstract: Open access to the world's scientific and technological information is a worthy goal for the library profession. Scholarly communication occurs through journals, conferences, and articles daily. The open access movement supports students, the academic community, and citizens of industries and their professional development. Users require timely and affordable access to the information to frame their research questions, design their approaches, and verify their results. As Librarians, we must facilitate these functions. Open access is one vital approach. In the past, we had focused on elevating awareness of open access to scientific and technological information. This paper highlights a more open society through better access to information

Sl. No	Article	Author	Source	Year
2	Roles and Responsibilities of Library Professionals in Managing Open access Institutional Repositories	*Sindhu PN, Kishore Kumar S*	International Journal of Information Studies Vol: 17 No: 1	2025

Abstract: Institutional repositories (IRs) have become indispensable platforms for academic institutions to preserve, disseminate, and promote open access to scholarly outputs. Managed by library professionals, IRs play a crucial role in advancing scholarly communication by facilitating global access to research articles, theses, datasets, and other scholarly materials. This article examines library professionals' pivotal roles and responsibilities in managing open-access IRs. Key responsibilities include content acquisition and management, technical infrastructure maintenance, policy development and compliance, user support and training, and promotion and advocacy. Library professionals ensure the acquisition and organisation of scholarly content while adhering to copyright regulations and metadata standards to enhance discoverability. They collaborate with IT specialists to maintain secure and user-friendly repository platforms, implement policies to govern content submission and access and provide user support through workshops and consultations. By advocating for open-access principles and promoting repository use, librarians enhance institutional research's visibility and impact. Despite resource constraints and copyright complexities, library professionals innovate to meet evolving technological and scholarly needs, ensuring the long-term preservation and accessibility of scholarly knowledge through IRs.

Sl. No	Article	Author	Source	Year
3	Green Library: The Role of Librarian in Building Green Libraries	*Mala D, Vitthal T. Bagalkoti*	International Journal of Information Studies Vol: 17 No: 1	2025

Abstract: The libraries in the modern era face the issue of global surface, disforestation and working for environmental sustainability through developing green libraries through its social responsibility. This paper discusses the green practices that can help build the green libraries of a sustainable environment by supporting water conservation and energy conservation, reducing pollution and creating a healthy atmosphere for future generations. Green libraries are built with environment-friendly building materials, which maximize the utilization of locally

available materials and natural resources, proper utilisation of waste water and less use of artificial energy by using natural ventilation and renewable solar energy effectively. Library professionals are taking part in going green for sustainable development by taking precautionary measures to decrease global warming, greenhouse gases, and pollution and adhering to green practices for a healthy environment and survival. The study covers the role of librarians in building green libraries and practising green habits in libraries. The steps involved in creating green libraries and the skills that need to be updated and adopted by library professionals are discussed.

Sl. No	Article	Author	Source	Year
4	Artificial Intelligence: Prospective and Challenges for Library Services	*Prasanna Kumar H.E, Krishnamurthy M, Shyamalatha*	International Journal of Information Studies Vol: 17 No: 1	2025

Abstract: Artificial intelligence (AI) has opened new paths for research in every discipline. The future is bright since AI is present in every aspect of business. Thanks to AI, libraries can now accomplish their aim more easily and effectively. Given how often AI is utilised, librarians must be creative to remain relevant. Today, information technology development significantly impacts the relationship between electronic and physical library resources.

Sl. No	Article	Author	Source	Year
5	Scholarly Literature in Digital Humanities: A Comparative Analysis of Open Access and Non-Open Access Publications	*Sandra M K, Rupesh Kumar A.*	International Journal of Information Studies Vol: 17 No: 1	2025

Abstract: Digital Humanities (DH), as a research area, has attracted the attention of scholars across the globe. The present study attempts to trace the publication and citation trends in DH literature with a comparative analysis of Open Access (OA) and Non-Open Access (Non-OA) publications using a dataset of 3,731 publications collected from Scopus. DH literature is characterized by a steady growth from 1971 to 2024.

The highest number of publications have been produced during 2022 (475). Although a consistent increase in OA publications can be witnessed since 2009, a significant portion of DH literature (65%) is non-open access. In terms of citations, OA publications show greater potential. Mann Whitney U test shows that the mean rank of citation counts for OA publications (2036.47) is higher than that of non-OA publications (1772.56). The result is statistically significant (p-value=.000). Green OA is the most preferred OA channel, with 27% of OA publications. USA is the top contributor to DH literature with 23% of publications, while Belgium tops the list with 62% open access publication output. Computer Science (48%) is the most predominant subject area in DH. Articles andconference papers constitute 86% of the total literature, indicating authors' preference for scholarly communication.

Sl. No	Article	Author	Source	Year
1	A Study of the Influence of AI on Library Systems Processes: A Review	*Sharmila Nataraj, Narendra Babu.*	International Journal of Information Studies Vol: 17 No: 3	2025

Abstract: Library Systems have radically changed since the advent of artificial intelligence (AI) augmented systems. Advanced computer-based systems have increased the effectiveness of classifying, ordering, retrieving information, referring, and other standard library management activities. This paper attempts to consider the factors and interactions affecting the workings of library systems due to the introduction of AI systems. Librarianship, perhaps, finds itself in a very competitive position from AI efficiency in classifying, ordering, retrieving, and other standard tasks in library management. The paper reviews the research articles of the last 15 years in this field of studies according to CODR (Classifying, Ordering, Data recovery and Reference). It provides a coherent idea of the various factors influencing the adoption of AI in library systems. It also gives a research agenda for future research in this regard. Thus, this paper discusses AI from various fronts regarding the entry of AI in library systems and the multiple factors that influence it.

Sl. No	Article	Author	Source	Year
2	Improving Public Library Services through a Strategic Publicity Campaign in Nigeria	*Ejiro Sandra Ukubeyinje, Diseiye Oyighan, Etido Emmanuel Nelson, Bolaji David Oladokun*	International Journal of Information Studies Vol: 17 No: 3	2025

Abstract: Public libraries in Nigeria have a rich history and play a crucial role in community development; however, they face significant challenges, including inadequate funding, outdated infrastructure, and limited resources. This Paper explores how strategic publicity campaigns can enhance public library services in Nigeria. It begins by examining the current state of public libraries, highlighting their historical evolution, present challenges, and underutilization. The role of publicity in public services is then analyzed, emphasizing its importance in raising awareness, building trust, encouraging community engagement, and attracting funding. Understanding the mechanics of publicity campaigns, including their objectives, components, and strategies, is essential for their successful implementation. Effective publicity can significantly benefit public libraries by increasing public awareness, enhancing community support, attracting funding, building a positive image, promoting lifelong learning, and leveraging digital media. The paper concludes by offering recommendations for Nigerian public libraries to implement strategic publicity campaigns, underscoring the potential for revitalization and sustainability through enhanced visibility and community engagement.

Sl. No	Article	Author	Source	Year
3	Use of AI Chatbots among Librarians: Implications for Future Library Services	*Lawrence, Arumuru*	International Journal of Information Studies Vol: 17 No: 3	2025

Abstract: The purpose of this study was to examine the use of AI chatbots among librarians in Nigerian university libraries and assess their potential impact on future library services. The study was conducted to investigate the current usage levels of AI chatbots, their potential for enhancing service delivery in the future, and the challenges associated with their implementation. Guided by the Technology Acceptance Model, an ex post facto research design was employed. Data were collected through a questionnaire distributed to a purposive sample of 278 librarians (28%) from a population of 989 across six states in Nigeria's geopolitical zones. Of the distributed questionnaires, 200 responses

(72%) were completed and analyzed using descriptive statistics, including frequency, percentage, and mean. The criterion mean of 2.50 was established for interpreting the data, with findings indicating a low current usage level of AI chatbots among librarians (Aggregate x = 1.92, Crit. x = 2.50).The study revealed promising prospects for AI chatbots in Nigerian university libraries, including their potential to significantly automate routine tasks (91%), improve accessibility to library resources (81%), enhance outreach programs (76%), provide multilingual support (71%), offer personalized user support (66%), and support research activities (65%). However, several challenges were identified, such as difficulties in customizing AI chatbots for specific library needs (96%), issues with user acceptance and trust (94%), limitations in handling specific topics (86%), the need for regular software updates (85%), and concerns regarding privacy and security (80%). The study recommends that university administrators and library leaders invest in modern technological infrastructure and provide comprehensive training for librarians to ensure effective implementation and management of AI systems. Addressing these challenges and capitalizing on the potential of AI chatbots could transform future library services in Nigerian universities.

Sl. No	Article	Author	Source	Year
1	In Memoriam: The Science of Rohini M. Godbole	*Dilip Kumar, GhoshSreerup Raychaudhuri*	Resonance Vol: 30 No: 3	2025

Abstract: The late Professor Rohini Madhusudan Godbole (1952-2024)- Rohini to friends, acquaintances and students alike-was not just a high energy physicist par excellence, but also an infectiously enthusiastic participant in conferences, meetings, discussions and committees. Her immense versatility in her own area of speciali-sation enabled her to speak incisively, and with authority on prac-tically every topic, and, in the rare cases when she found herself unfamiliar with something, she would proceed to learn it with all the humility of a mere beginner. It was this rare thirst for knowl-edge and ability to interact at all levels with her fellow scientists which endeared her to the entire high-energy physics community around the world and made her, as mentioned above, the best- known face of Indian high-energy physics around the world.

Sl. No	Article	Author	Source	Year
2	A Glossary of Terms Used in Particle Physics	*Patrick Das Gupta, D Indumathi*	Resonance Vol: 30 No: 3	2025

Abstract: This issue contains several articles on the work and life of Prof Rohini Godbole who passed away recently. Prof God-bole worked in the area of high-energy or particle physics. Her work covered a wide area of problems in this field. Mod-ern particle physics is based on the quantum theory of fields, special relativity and gauge symmetries. This expository ar-ticle tries, in simple terms, to explain some of the underlying technical concepts and ideas of particle physics for the benefit of undergraduate students.

Sl. No	Article	Author	Source	Year
3	Navigating the Deluge: Understanding India's Diverse Flood Landscape	*K Muralidharan, Prerak Pathak*	Resonance Vol: 30 No: 3	2025

Abstract: This article delves into India's geographical diversity and sus-ceptibility to various types of floods. From the towering Hi-malayas to the expansive flood plains of major rivers and ur-ban areas, each geographical region is prone to floods due to regional climate, topography, atmospheric disturbances, and anthropogenic factors. Additionally, the article provides a brief overview of the historical context of the country's flood events and their impacts on biodiversity, infrastructure, and human life. The article is underpinned by a range of case studies detailing different flood events from the past. It also incorporates empirical data obtained from government au-thorities such as the Disaster Management Authority, the In-dia Meteorological Department, and regional weather depart-ments. The study highlights the combined consequences of climate change and human activities, underscoring the ne-cessity for sustainable flood management strategies to avert future perils.

Sl. No	Article	Author	Source	Year
4	Sonodynamic Therapy: A Potential Technique for Cancer Treatment	*Rajesh Kushwaha, Samya Banerjee*	Resonance Vol: 30 No: 3	2025

Abstract: Cancer remains a frontier health challenge for humankind, both socially and economically. Despite significant advances in cancer therapies, the problem of drug resistance and side effects of current clinical cancer therapies drives the relent-less pursuit of advanced therapeutic modalities. In this re-gard, 'Sonodynamic Therapy' (SDT) has emerged as a promis-ing non-invasive cancer treatment modality, combining sonose-nsitizers (SSs) with focused ultrasound waves to selectively kill cancer cells. In this article, we discuss the advancements in SDT using organic compounds, nanomaterials, and tran-sition metal complexes as sonosensitizers. The use of organic compounds/nanoparticles enhances the precision and efficacy of SDT, while transition metal complexes offer robust proper-ties and imaging capabilities. Moreover, SDT showed promis-ing feasibility and safety under the clinical trials, showing sig-nificant tumour size decrease and even complete removal in some cases. Beyond cancer, SDT also presented significant re-sults for treating bacterial infections and neurological disor-ders. Overall, SDT represents a substantial advancement in cancer treatment, offering a targeted, non-invasive approach with the potential for multimodal therapy. It has all the po-tential to be one of the beneficial and safer next-generation cancer therapies.

Sl. No	Article	Author	Source	Year
5	C. V. Raman as a Science Communicator: A Historical Perspective	*G V Pavan Kumar*	Resonance Vol: 30 No: 3	2025

Abstract: C. V. Raman (1888-1970) was a creative scientist, enthusiastic teacher and a science celebrity in India. In all these roles, he communicated science effectively. In this essay, I ask how and why he communicated science. I take a few examples from his research writings and show his ability to explain science lucidly. By looking into his thoughts on teaching and those of his students, I explore Raman, the teacher. Finally, I dis-cuss a few aspects of his methods of communicating science to the public. I emphasize Raman's exposition and reveal a dichotomy.

Sl. No	Article	Author	Source	Year
1	The Founding Trinity of Molecular Evolution	*Partha P Majumder*	Resonance Vol: 30 No: 4	2025

Abstract: Population genetics was founded by R. A. Fisher, J. B. S. Haldaneand Sewall Wright. With the advancement of experimentaltechniques in genetics, it became possible to studymolecular genetic variation among groups of individuals. J.F. Crow, Motoo Kimura and Masatoshi Nei provided the foundationof molecular evolution. In this article, I briefly describesome of the major scientific contributions of the threestalwarts of genetics. In my narrative, I also provide thehistorical context and impact of the contributions of Crow-Kimura-Nei.

Sl. No	Article	Author	Source	Year
2	Lagrangian Equilibrium Points	*Pankaj Hurkat, Nisha Patel, Pruthul Desai*	Resonance Vol: 30 No: 4	2025

Abstract: For the Sun-Planet system, Lagrange points are locations aroundthe planet's orbits in space where the combined gravitationalforces of the Sun and the planet balance the centrifugalforce experienced by a much smaller satellite 'parked' there.Recently, the news of the successful injection of Aditya-L1,the first space-based Indian observatory to study the Sun,into its final destination orbit, some 1.5 million kilometersfrom the Earth, has brought to the limelight the vital significanceof these points. In this article, we present a brief historyof the 'three-body problem' and discuss its simplified variant,the 'circular restricted three-body problem' (CR3BP).Taking the Sun-Earth system as an example of CR3BP, thelocation of its five Lagrangian equilibrium points is determinedusing a code written in Python. The stability of theseequilibrium points is discussed. Finally, the significance ofLagrangian equilibrium points for space mission design andsatellite position is also briefly discussed.

Sl. No	Article	Author	Source	Year
3	Xylarium: The Wood Library	*Manjri Somal, Mishra Kamal*	Resonance Vol: 30 No: 4	2025

Abstract: The xylarium is like a library, but instead of books, it containsauthenticated wood specimens from all around the world. Theterm 'xylarium' comes from the Greek word xylon, whichmeans 'wood' and refers to a collection of wood specimenswith proven and certified accuracy. Xylarium's main purposeis to display wood collections for scientific research, education,and other related programs. These wood collectionscontain taxonomic information (family genus, species) andcollection details, including date, collector's name, herbariumvoucher number, country, altitude, latitude, longitude,plant habit, habitat, and other notes of the wood specimens.These collections are beneficial not only to wood anatomists,botanists, and foresters but also to other fields such as antiques,furniture restoration, forensic timber identification,history, ecology, archaeology, and climate change studies

Sl. No	Article	Author	Source	Year
4	Photon-Atom Interactions	*Bhakta Kunwar*	Resonance Vol: 30 No: 4	2025

Abstract: The interaction of photons with matter represents one of themost varied classes of phenomena. This includes Rayleighscattering, Compton scattering, photoelectric absorption, pairproduction, nuclear Thomson scattering, nuclear resonancescattering, and Delbruck scattering. Since, in most appliedfields like medical science, basic physics, agriculture, etc., itis the interaction of Gamma (γ) rays with matter that givesthe desired output, it is of prime importance to know the variouspossible interactions of γ ray photons with matter at theatomic level. Thus, investigating photon-atom interactionsoffers undergraduate students an opportunity to realize andunderstand the phenomena mentioned above.