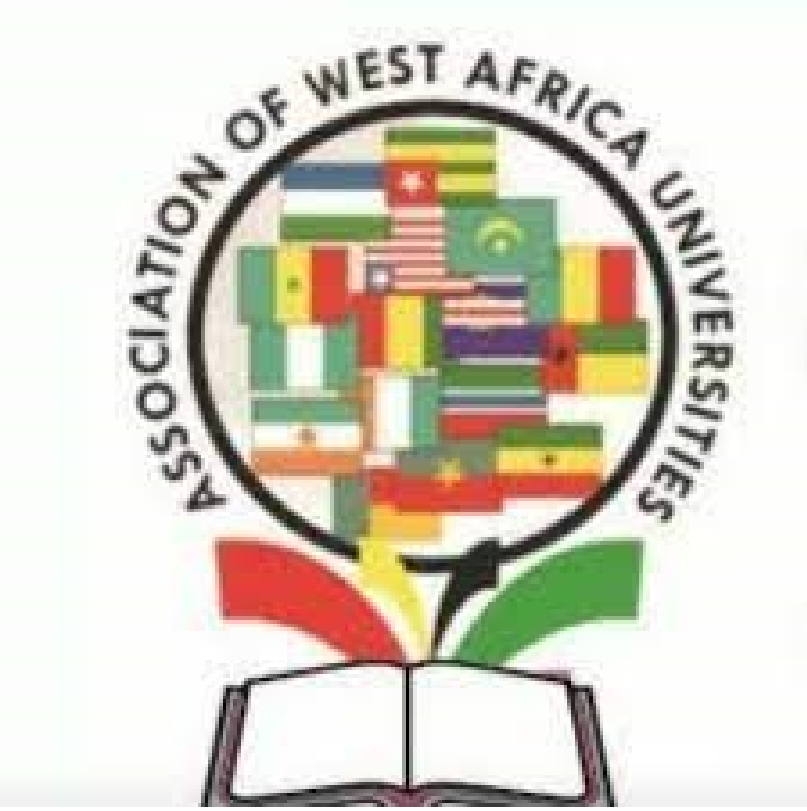
10th Association of West African Universities Conference



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1	ABOYEJI, Oyeniyi Solomon Ph.D. Department of History and International Studies, Faculty of Arts, University of Ilorin, Ilorin, Nigeria	Artificial Intelligence In Historical Inquiry: Impact, Challenges And Prospects In Nigerian Educational System	University of Ilorin, Ilorin, Nigeria
2	Zainab Temitope ABDULLATEEF, Dr. Omolara Adeola ADESINA, Sikiru Issa NUHU abdullateef.tz@unilorin.edu.ng Department of Educational Management Faculty of Education, University of Ilorin lanrelanret.adesina@unilorin.edu.ng Department of Educational Management Faculty of Education, University of Ilorin sikiru.issa@kwasu.edu.ng Department of Business and Entrepreneurship Education Faculty of Education, Kwara State University	Utilization of AI Tools For Educational Research Among Postgraduate Students At The University Of Ilorin	University of Ilorin, Nigeria & Kwara State University, Nigeria
3	*Dunmade A. O., *Koledafe O. S. & **Akanbiemu A. A. *Centre for Open and Distance Learning, University of Ilorin **National Open University Nigeria Correspondence: derin_d@unilorin.edu.ng	How Open and Distance Learners are Using Artificial Intelligence: A Case Study of CODL, University of Ilorin, Nigeria	Centre for Open and Distance Learning, University of Ilorin,Nigeria
4	Fagbamila, Olumide David Department of Sociology, University of Ilorin, Nigeria olufagba@gmail.com	Artificial Intelligence and Reduction of Human Trafficking Activities along Nigeria-Benin Republic corridor	University of Ilorin, Nigeria
5	Murtala Abdulyaqin Tukur1 Yusuf Habibat Abubakar2 Lawal Abdulmunin Abubakar3 Department of Educational Management University of Ilorin, Ilorin Nigeria Correspondence: murtala.at@unilorin.edu.ng	Artificial Intelligence and the Future of Interactive Teaching and Learning: Exploring Experience of Nigerian University Lecturers	University of Ilorin, Ilorin Nigeria
6	Ahmed R.N.*, Aliyu A., Otuyelu F.O. , Sa'ad B.A., Ajadi F.A. , Jimoh, S.M., and Abubakar M.S. *Corresponding author: anrisikat@unilorin.edu.ng;	Assessing Prevalence of Multidrug-Resistant Bacteria in Respiratory Tract Infections in Ilorin and effect of Essential Oil of Eucalyptus globulus	University of Ilorin, Ilorin, Nigeria. & Federal University of Health Sciences, Ila Orangun, Osun state.
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	Information Technology University of Ilorin oyekunle.ra@unlorin.edu.ng	Learning in Predicting Customer Behaviour	
8	Oniyangi, Shuaib Olanrewaju (Ph.D.) Department of Health Promotion and Environmental Health Education, Faculty of Education, University of Ilorin. oniyangi.so@unilorin.edu.ng	Artificial Intelligence (AI) Usage and Its Implications on Health and Wellness of Undergraduates in University of Ilorin	University of Ilorin, Nigeria
9	Micheal Olaolu Arowolo, Adebayo Mohammed Ojuolape*, Elijah Iseoluwa Soladoye, Damilola David Popoola, Paul Adeolu Omosebi, Amos Orenyi Bajeh and Marion Olubunmi Adebiyi	A Seamless Payment System Between Countries Using Stellar, A Blockchain-Based Network For Currencies And Payments	University of Missouri Columbia, Missouri. University of Ilorin, Ilorin, Nigeria. Landmark University, Omu-Aran. Kwara State University, Malete. Trinity University Yaba, Lagos. *Corresponding Author: Ojuolape.ma@unilorin.edu.ng
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11	Aliy Abdulwahid Adebisi Department of Arabic, Faculty of Arts, University of Ilorin, Ilorin, Nigeria. Corresponding author: adebisi.aa@uniloring.edu.ng	The Role of Artificial Intelligence in Enhancing Research in Translation Studies: Opportunities and Challenges	University of Ilorin, Ilorin, Nigeria. Corresponding author: adebisi.aa@uniloring.edu.ng
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14	Dr Ahmad Abubakar Agbaje	Artificial Intelligence and the Future of Arabic Education in Nigeria: Opportunities, Challenges, and Prospects for Integration	Fountain University, Osogbo, Nigeria Corresponding author: ahmadagbaje68@gmail.com
15	Abdullahi Mohammad IBRAHIM Dr. Mohammed Lawal AKANBI akanbi.amal@unilorin.edu.ng Tawakalitu Raufu BALOGUN balogun.tr@unilorin.edu.ng	Between Aacr2 And Rda, What Has Changed Occurs On Them And Future Of Education To Artificial Intelligence	University of Ilorin, Nigeria
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18	Veronica Jacinta Nyen (Miss), Joshua Nii Lomotey Armah (Mr.), Solomon Cedric Monne (Mr.), Samuel Boakye (Mr.) Corresponding Author Eric Shynada Loglo (Mr.) eric.loglo@stu.ucc.edu.gh ericloglo52@gmail.com	Sentiment Analysis of Artificial Intelligence and the Future: A Triadic Framework for Sustainable Governance	University of Cape Coast, Ghana.
19	Felicia Kikelomo Oluwalola oluwalola.fk@unilorin.edu.ng Department of Educational Management, University of Ilorin, Ilorin, Nigeria	Exploring the Impact of Artificial Intelligence on Communication Effectiveness in Business Education: A Lecturer's Perspective	University of Ilorin, Ilorin, Nigeria
20	Habibat Abubakar YUSUF & Abdulyakeen Tukur MURTALA Department of Educational Management Faculty of Education, University of Ilorin,	The double-edged sword of LMS in Basic Education Programme: Teacher Lived	University of Ilorin, Nigeria

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22	Prof. Katamba Abubakar Saka	Artificial Intelligence and Emerging Issues in Library and Information Service Delivery	Federal University of Technology, Minna, Nigeria. Corresponding author: s.katamba@futminna.edu.ng
23	Khadijah Ashiru-abdulrahman, Ph.D Department of Linguistics and African languages University of Abuja, Abuja, Nigeria ashkhadfola@gmail.com & Habiba Yusuf Abubakar University of Ilorin	Exploring Cultural Accuracy and Equivalence in Translation through Ai Powered Tools: Efficiency Of Yoruba And Hausa	University of Abuja, Abuja, Nigeria & University of Ilorin
24	Oniye, Olayinka Ibrahim Department of Religions, University of Ilorin, Ilorin, Nigeria Corresponding Author: oniye.oi@unilorin.edu.ng	Understanding the Ethical Considerations of Using Artificial Intelligence (AI) in Islamic Research and Scholarship	University of Ilorin, Ilorin, Nigeria
25	Yahya, Shaykh Ahmad Department of Religions University of Ilorin, Ilorin, Nigeria Corresponding author: yahya.as@unilorin.edu.ng	The Ethical Principles of Islam: A Guide for the Enhancement of AI's Ethical Capabilities	University of Ilorin, Ilorin, Nigeria
26	Yusuph, Dauda Gambari Department of Religions, University of Ilorin, Ilorin, Nigeria Corresponding author: yusuph.dg@unilorin.edu.ng	Survival of Traditional Islamic Educational System in Nigeria in the wake of Artificial Intelligence (AI) Application to Islamic Learning	University of Ilorin, Ilorin, Nigeria

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29	David Olugbenga Adetitun, Rebecca Ohunene Suberu, and Abdullahi Ola Rajee. *Corresponding Author email adetitun.do@gmail.com, adetitun.do@unilorin.edu.ng	Evaluating Metal Complexes' Antibacterial Effects On Bacterial Strains Isolated From Indoor Air In 30 Unilorin Offices	University of Ilorin, Ilorin, Nigeria
30	Aishat A. Yusuf, A. O. Akanbi, Khadijat S. Ameen, K. O. Afolabi, R. E Mohammed & Rihanat A. Ahmed Department of Science Education, University of Ilorin, Ilorin, Nigeria Corresponding Author: yusuf.mf@unilorin.edu.ng	Integrating Artificial Intelligence with Augmented and Virtual Reality for Collaborative Senior Secondary School Science Learning in Ilorin, Nigeria	University of Ilorin, Ilorin, Nigeria
31	Bilqis A. Lawal*, Moriam A. Adegbite, Sukurat O. Usman and Muhammad T. Ghazali Department of Pharmacognosy and Drug Development, Faculty of Pharmaceutical Sciences, University of Ilorin, Ilorin, Nigeria *Corresponding author: lawal.ba@unilorin.edu.ng	Artificial Intelligence in Pharmacognosy: Advancing Natural Product Discovery and Quality Control	University of Ilorin, Ilorin, Nigeria
32	*Joseph Dlama Zira., Chuku Aleruchi, Ibrahim Salamatu Osanga, Salami	Artificial Intelligence in Research and	Federal University of Lafia, Nigeria

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	Abdulganiyu, Aleh Alexander Monday, Owoseni Mojisola Christiana, Ibitomisin Samuel Femi. Faculty of Health Sciences, Federal University of Lafia *Corresponding Author: josephdlama@gmail.com	Sustainable Development: Shaping the Future through Innovation and Ethical Governance with Insights from UNESCO's 2024 Guidance Document	
33	Joseph Dlama Zira., Chuku Aleruchi, Emmanuel Richard, Ibrahim Salamatu Osanga, Salami Abdulganiyu, Aleh Alexander Monday, Owoseni Mojisola Christiana, Ibitomisin Samuel Femi. *Corresponding Author: josephdlama@gmail.com	Artificial Intelligence, Health And Wellbeing Artificial Intelligence In Radiation Medicine: Enhancing Diagnosis, Workflow, And Patient Care For Effective Health Outcomes	Federal University of Lafia, Nigeria
34	Abdulhakeem ZUBAIR Ph.D. Department of Arabic Faculty of Arts University of Ilorin zubair.ah@unilorin.edu.ng	Cross-Cultural Communication: Examining AI's Role in Facilitating Cross-Cultural Communication between Arabic and other Languages in West Africa	University of Ilorin zubair.ah@unilorin.edu.ng
35	Oluwatosin John IBITOYE Department of Performing Arts and Film Studies, Kwara State University, Malete, Nigeria. E-mail: oluwatosin.ibitoye@kwasu.edu.ng	Global Markets, Local Creativities: Artificial Intelligence and the Folk Pop Music Business in a Digital Age	Kwara State University, Malete, Nigeria.
36	Fasilat Olajumoke RAFIU, Nnaemeka Michael IHENACHO and Kingsley Chukwuemeka AMANKWE Department of Environmental Management and Toxicology Kwara State University Malete, Nigeria Fasilat.rafiu@kwasu.edu.ng & National Space Research and Development Agency, Airport Road, Lugbe, Abuja Nnaemeka.ihenacho@nasrda.gov-.ng	Integrating GIS and Machine Learning for Flood Prediction and Monitoring in North Central Nigeria	Kwara State University Malete, Nigeria & National Space Research and Development Agency, Abuja
37	Adam Adebayo Sirajudeen, PhD Federal University of Lafia - Nigeria sirajudeenadebayoadam@gmail.com; adam.adebayo@arts.fulafia.edu.ng	Harnessing AI for Enhancing Quality in University Education in Nigeria: Issues in Teaching and Learning Translation and Interpretation	Federal University of Lafia – Nigeria

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38	Mohammed Sani. Faculty of Pure and Applied Sciences Department of Environmental Management and Toxicology, Kwara State University Malete. Email: sanni.mohammed@kwasu.edu.ng	Consumption Of Lead A License To Short Life Span: An Escalating Scenerio in Sub-Saharan Africa, Nigeria	Kwara State University Malete, Nigeria
39	SHITTU, Mutmainnah Temitope University of Ilorin, Ilorin, Nigeria Email: mutmainnahtope@gmail.com	Prevalence, Causes and Health Implications of Depression among Undergraduates in The University of Ilorin	University of Ilorin, Ilorin, Nigeria
40	Hafees Tosin SULYMAN (Ph.D.) Department of Early Childhood and Primary Education Faculty of Education, Kwara State University, Malete, Nigeria sulyman.hafees@kwasu.edu.ng / htsulyman@gmail.edu.ng	Artificial Intelligence and the Future of Educating Children in Nigerian Schools: AI and the Nigerian Learner. A Match Made in the Future	Kwara State University, Malete, Nigeria
41	Aleh Alexander Monday , Chuku Aleruchi, Ibrahim Salamatu Osanga, Salami Abdulganiyu, Dlama Zira Joseph, Owoseni Mojisola Christiana & Ibitomisin Samuel Femi Corresponding author: Department of Social Work, Faculty of Social Sciences aleha47@gmail.com	Artificial Intelligence in Health and Wellness: Revolutionizing Healthcare, medical Social Work Practice and Personal Wellbeing	Federal University of Lafia, Nigeria
42	Dr. Oyelakin Ogungbade University of Ilorin, Nigeria ogungbade.ok@unilorin.edu.ng	Usage of Artificial Intelligence tools on teaching as expressed by University Lecturers in Kwara State, Nigeria: Counselling Implication	University of Ilorin, Nigeria
43	Abdulwaheed Musa, and Daniel Oluyemi Department of Electrical and Computer Engineering, Kwara State University, Nigeria 2 Institute for Intelligent Systems, University of Johannesburg, South Africa Authors email addresses: abdulwaheed.musa@kwasu.edu.ng	Artificial Intelligence in Higher Education: Opportunities, Challenges and Ethical Issues	Kwara State University, Nigeria & University of Johannesburg, South Africa
44	Dapo Olorunyomi, Ibrahim Jawando, and Gbemisola Animasawun Center for Peace & Strategic Studies University of Ilorin	Artificial Intelligence, Credibility and Security of Nigeria's 2027 Presidential Elections: Matters Arising	University of Ilorin, Nigeria
45	Mr Abdullateef Dasola Hussain hussain.ad@unilorin.edu.ng	Artificial Intelligence Adoption for Conflict	University of Ilorin, Nigeria

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48	Nimota Jibola Kadir Abdullahi (PhD) Department of Educational Management, Faculty of Education, University of Ilorin, Nigeria abdullahi.njk@unilorin.edu.ng	Managing Artificial Intelligence-Driven Platforms For Student Development	University of Ilorin, Nigeria
49	Dr. BALOGUN, Abdulrasaq Olatunji, Dr. ONIYE, Ridwanullahi Kolapo, Dr. IDRIS-IYEKOLO, Olushola & Dr. BADAMAS, Lasbat Omoshalewa Social Sciences Education, University of Ilorin Corresponding author: balogun.ao@unilorin.edu.ng	Emergence of Artificial Intelligence is it a threat or Opportunity? Analysis of Perceived Student and Teacher Readiness for AI-Driven Education in Kwara State, Nigeria	University of Ilorin, Nigeria
50	Rahmat Folashade ZAKARIYAH, Iyiola Olatunji OLADUNJOYE, Precious Morenikeji BATEREN, Kamoldeen Abiodun AJIJOLAKEWU, and Risikat Nike AHMED Department of Microbiology, Faculty of Life Sciences, University of Ilorin, Ilorin, Kwara State, Nigeria.	Leveraging In silico Approaches to Combat Hospital Acquired Staphylococcus aureus by accelerated Drug Discovery	University of Ilorin, Ilorin,Nigeria.
51	A.A Mohammed1 and M.O Olabemiwo2 1 Department of Industrial Chemistry, Faculty of Physical Sciences, University of Ilorin, Ilorin, Nigeria. 2 Department of Pure and Applied, Faculty of Pure and Applied Sciences, Ladoke Akintola University of Technology, Ogbomoso, Oyo State.	Bio-direct synthesis of Au-Ni nanohybrid from Ananas comosus extract for photocatalytic degradation of polyethylene films under solar irradiation	University of Ilorin, Ilorin, Nigeria. & Ladoke Akintola University of Technology, Ogbomoso, Oyo State, Nigeria
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53	ALABI, Oladimeji Mohammed (PhD.) alabi.om@unilorin.edu.ng Department of History and International Studies, Faculty of Arts, University of Ilorin, Ilorin, Nigeria	Artificial Intelligence, Indigenous Knowledge and Traditional Security System in Yorubaland: a Historical Analysis	University of Ilorin, Ilorin, Nigeria
54	Olatinwo, Latifat Kehinde, Wahab, Munir Jamiu, and Saka, Zainab Temitope, Department of Agricultural Economics and Extension, Kwara State University, Kwara State, Nigeria. Department of Agricultural Economics and Extension, Yobe State University, Damaturu, Yobe State, Nigeria	Artificial Intelligence as a Tool to Mitigate Climate Change in Agriculture: An Empirical Review	Kwara State University, Kwara State, Nigeria. & Yobe State University, Damaturu, Yobe State, Nigeria
55	Muhammad Baba, Ph.D, Ishaku Muhammad Baba Department of Educational Foundation Niger State College of Education, Minna, Nigeria. Fati Lami Abubakar Institute of Legal and Administrative Studies, Minna	Enhancing Quality Management of Primary Schools through effective integration and utilization of Information and Communication Technology (ICT) in Nigeria	Niger State College of Education, Minna, Nigeria. Fati Lami Abubakar Institute of Legal and Administrative Studies, Minna
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59	Muinat Olanike Kazeem, Ayomide Rachael Ibikunle, Beloved Funmilola Otitoju, Frank Kunle, Ibrahim Yusuf, Aisha Omolewa Tiamiyu Department of Microbiology, University of Ilorin, Kwara State, Nigeria 2Department of Microbiology, Bayero University, Kano State, Nigeria Corresponding author: kazeem.mo@unilorin.edu.ng	Valorization of feather waste by indigenous keratinolytic bacteria for Response Surface Optimization of keratinase production	University of Ilorin, Nigeria Bayero University, Kano State, Nigeria
60	Yusuf Suleiman, Irenus Chimuanya Emeruem, Ibrahim Musa Akanbi & Yusuf Olasunkanmi Ibrahim Department of Educational Management and Counselling, Faculty of Education, Al-Hikmah University, Nigeria. School of Education, Unicaf University, Cyprus. Department of Science Education, Faculty of Education, Al-Hikmah University, Nigeria. Corresponding Author: yusufsuleiman@alhikmah.edu.ng	Barriers To Ai-Powered Chatbot Adoption For Enhancing Student Support Services In Nigerian Universities: Insights From Al-Hikmah University	Al-Hikmah University, Nigeria. School of Education, Unicaf University, Cyprus.
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63	Musiliyu Olorunnishola SANNI (PhD) Department of Performing Arts and Film Studies Kwara State University, Malete, Nigeria Corresponding author: musiliyu.sanni@kwasu.edu.ng	Artificial Intelligence and Stage Design Innovation: A Technological Transition Analysis of Selected Nigerian Production Companies	Kwara State University, Malete, Nigeria
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65	ALABI A. Okunola and BAKARE A. Adekunle Department of Biology, Federal University of Technology, Akure, Ondo State, Nigeria Cell Biology and Genetics Unit, Department of Zoology, University of Ibadan, Ibadan, Nigeria. Corresponding author: alabiokunola@yahoo.com; oaalabi@futa.edu.ng	Bioaccumulation and cytogenotoxicity of toxic organic and inorganic chemicals in soil, edible plant and well water from a major electronic waste dumpsites in Nigeria	Federal University of Technology, Akure, Ondo State, Nigeria University of Ibadan, Ibadan, Nigeria.
66	Professor Aliyu Muhammad Jamiu Department of Arabic and Islamic Studies and Prof. Lateef Onireti Ibraheem Department of Arabic, University of Ilorin Corresponding author: onireti@unilorin.edu.ng	AI Applications in Arabic Linguistics and Literature: Enhancing Multidisciplinary Research and Regional Synergy	University of Ilorin, Ilorin, Nigeria
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68	Yunus Aliyu Department of Arts Education, University of Ilorin, Ilorin, Nigeria aliyu.y@unilorin.edu.ng Saheed	Developing An Ai-Powered Automated Essay Scoring System	University of Ilorin, Ilorin, Nigeria

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69	Abidoye, Florence Omosholape, Aladesuyi, David Adeyemi & Abidoye Adekunle Omotayo 1Department of Science Education, Faculty of Education, University of Ilorin, Nigeria 2Department of Statistics, Faculty of Physical Science, University of Ilorin, Nigeria *Corresponding Author's E-mail: abidoye.fo@unilorin.edu.ng	Assessment of Biology Students' Ethical Concerns About Artificial Intelligence In Higher Education In Kwara State	University of Ilorin, Nigeria
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71	Abdulwahab Olanrewaju ISSA1., Kennedy Arebamen EIRIEMIOKHAL2 & Abdulakeen Sodeeq SULYMAN3 1Department of Library and Information Science, Faculty of Communication and Information Science, University of Ilorin, Nigeria. drissa.ao@unilorin.edu.ng 2Department of Library and Information Science, Faculty of Information and Communication Technology, Kwara State University, Malete, Nigeria. 3Department of Library and Information Science, Kwara State Polytechnic. Ilorin, Nigeria Corresponding author: drissa.ao@unilorin.edu.ng	Perceived Ease-Of-Use and Usefulness as Correlates of Artificial Intelligence Use for Indigenous Knowledge Management in a Nigerian Public Library	University of Ilorin, Nigeria Kwara State University, Malete, Nigeria. Kwara State Polytechnic. Ilorin, Nigeria
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73	Mamadou Jean Baptiste Niassy Science and Technology Universite Numerique Cheikh Hamidou Dakar, Senegal mamadoujeanbaptiste.niassy@unchk.edu.sn	Applying Q-learning to Continuous State and Action Spaces in Soccer Simulations	Dakar, Senegal
74	Dr Jamiu Saadullah Abdulkareem Department of Arabic, University of Ilorin, Ilorin, Nigeria abdulkareem.js@unilorin.edu.ng	Artificial Intelligence for Arabic Language Study: Visions and Expectations	University of Ilorin, Nigeria
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76	Dr Oluwatosin Busayo Igbayiloye Department of Jurisprudence and International Law, Faculty of Law, University of Ilorin igbayiloye.ob@unilorin.edu.ng & John Afolabi Ogedengbe Department of Jurisprudence and International Law, Faculty of Law, University of Ilorin	Artificial intelligence and legal research in Nigeria: navigating the challenges	University of Ilorin, Nigeria
77	Chuku Aleruchi; Ibrahim Salamatu Osanga; Salami Abdulganiyu; Ibitomisin Samuel Femi ;Aleh Alexander Monday ; Dlama Zira Joseph & Owoseni Mojisola Christainana Corresponding author: aleruchichuku14@gmail.com	Global Health Initiatives and Artificial Intelligence: Application and Challenges	
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83	Abdulkarim Oloyede[1], Nasir Faruk[2], and Lukman Olawoyin[1] [1]Reader Department of Telecommunication Science, University of Ilorin [2]Professor, Department of Computing, Sule Lamiso University Kafin Hausa Corresponding Email: Oloyede.aa@unilorin.edu.ng	AI-Enabled Smart Cities: A Multi-Disciplinary Approach to Regional Integration	University of Ilorin
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	(Intelligence artificielle, communication, Biais Algorithmique, Ethique)	dynamiques d'échange informationnel Intelligence artificielle et communication	
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90	*Ibrahima GUEYE*[1] [1]Service d'accueil des Urgences de l'Hôpital militaire de Ouakam Adresse électronique : ibrahimaeygue@gmail.com	Elaboration d'une application de triage des patients au Service d'accueil des Urgences Mots-clés : informatique, triage, mathématiques	
91	Dr. Surajudeen Tosho Bakinde bakinde.st@unilorin.edu.ng	Prospective Cohort Study on the Impact of Artificial Intelligence on Chronic Disease Management Among Adult Patients at the University of Ilorin Teaching Hospital	University of Ilorin

A Seamless Payment System Between Countries Using Stellar, A Blockchain-Based Network for Currencies and Payments

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Abstract

INTRODUCTION: People currently require the transfer of funds between countries and currencies for a variety of reasons. In a country like Nigeria, this would necessitate a large number of intermediary services. These intermediary processes include opening temporary domiciliary accounts and paying a financial institution, which then assists in carrying out bank transactions that still take days to reflect, delaying the arrival of funds. Other services that reduce the amount of time involved have very high transaction costs.

OBJECTIVES: This study explores the benefits of cross-border payment using blockchain technology.

METHODS: Using blockchain, fraudulent activities can be significantly reduced, transaction speeds can be increased, transaction details can be protected from tampering to cover up tracks of manipulation, and these details can also be easily accessed, which aids in auditing. Blockchain also provides a level of abstraction in that every user on the blockchain network is identified by randomly generated keys, so that even if the details of a transaction are accessed by unwanted entities, they cannot easily identify which user is responsible for such transactions, ensuring a certain level of security.

RESULTS: This study suggests the application of blockchain technology to help remove cross-border payment restrictions highlighted in previous cross-border payment models and their flaws.

CONCLUSION: Current services that provide payment services between nations do not give their services to all countries due to fraudulent practices and other security challenges. Traditional cross-border trade has several issues that necessitate technical developments. As a result, there is a need to design a service that can easily manage cross-border payments. This is where blockchain can help. It is a breakthrough technology that provides decentralization, traceability, and immutability.

Keywords: Payment, Blockchain, Stellar. Payments, Worldwide, Network, Currencies

Between Aacr2 and Rda, What Has Changed Occurs on Them And Future Of Education To Artificial Intelligence

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Abstract

A library catalogue exists not only as an inventory of the collections of the particular library, but also as a retrieval device. It is provided to assist the library user to find whatever information or information resources they may be looking for. The paper proposes that this location objective of the library catalogue can only be fulfilled, if the library catalogue is constructed, bearing in mind the information needs and searching behavior of the library user. Comparing AACR2 and RDA viz-a-viz the changes RDA has introduced into bibliographic standard, the paper tries to establish the level of viability of RDA in relation to AACR2 to drive education on the frontier to artificial intelligence.

Keywords: AACR2, RDA, Library, Education, Artificial Intelligence

Ai-Driven Rear-End Collision Detection with Enhanced Predictive Capabilities Of Self-Attention Technique

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Abstract

Accurate collision prediction is vital for ensuring the safety and efficiency of autonomous delivery robots in dynamic environments. Traditional methods often struggle to capture the intricate spatial and temporal dependencies inherent in complex sequences, leading to challenges in learning subtle relationships influencing rear-end collisions over extended periods. However, self-attention LSTM (Long Short-Term Memory) models offer a solution by allowing the model to prioritize relevant information within input sequences. Unlike traditional LSTM models, which rely solely on hidden states, self-attention mechanisms enable the model to assign varying weights to different sequence parts, focusing on critical features and relationships. In this study, we propose a novel approach for the first time using a self-attention model combined with Long Short-Term Memory (LSTM) networks for collision prediction in autonomous delivery robots. Our methodology encompasses data collection, preprocessing, model architecture design, training, validation, performance evaluation, and comparative analysis with baseline methods. Experimental results demonstrate that the proposed self-attention LSTM achieved the lowest MSE and RMSE of 3.00E-5 and 0.00632, respectively, compared to the Baseline LSTM with an MSE and RMSE of 3.40E-05 and 0.00583. Conversely, the DNN algorithm performed less optimally, struggling to capture the complex pattern of collision predictive features, evident in its MSE and RMSE of 0.2181 and 0.46701. Overall, our research highlights the effectiveness of the self-attention LSTM model in accurately predicting collisions and enhancing navigation strategies for autonomous robots.

Keywords: Long Short-Term Memory (LSTM), self-attention, Collision, Prediction and Autonomous Delivery Robots.

Perception on AI-Driven Waste Segregation and Recycling in Kwara State, Nigeria: Implication for Environmental Policy

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Abstract

This study explores community perceptions of AI-driven waste segregation and recycling in Kwara State, Nigeria. The research employed a mixed-methods approach, combining quantitative surveys with qualitative focus group discussions (FGDs), to examine awareness levels, perceptions, and barriers to AI adoption. Descriptive statistics revealed that while 70% of respondents had heard of AI technologies, only 35% viewed AI as a feasible solution for waste management. This disparity suggests that misconceptions or limited understanding of AI may hinder its acceptance as a viable tool for improving waste segregation and recycling efforts. Younger participants (aged 18-35) showed a more favorable perception of AI, with 50% viewing it positively, compared to only 25% of older participants (aged 50 and above). Chi-square analysis indicated a significant association between age, education, and positive perceptions of AI, with younger, more educated individuals demonstrating greater openness to AI technologies. Qualitative data from FGDs highlighted key barriers to AI adoption, including poor infrastructure, low levels of public education, and skepticism, especially in rural areas. Participants emphasized the need for improved waste management systems and educational campaigns to make AI more relatable and relevant to local communities. The study concludes that while AI holds significant potential to improve waste management practices in Kwara State, its successful adoption requires a combination of public awareness initiatives, infrastructure development, and culturally tailored solutions. These findings offer valuable insights for policymakers and stakeholders aiming to integrate AI technologies into waste management strategies.

Keywords: Artificial Intelligence, waste segregation, recycling, public perceptions, technology adoption.

Artificial Intelligence In Historical Inquiry: Impact, Challenges And Prospects In Nigerian Educational System

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Keywords: *Artificial Intelligence, Historical Inquiry, Nigeria, Educational System*.

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Sub-theme: Artificial Intelligence and Indigenous Knowledge System

Abstract

As Artificial Intelligence (AI) continues to revolutionize various disciplines, its application in historical inquiry has sparked intense debate on balancing breakthrough discoveries with challenges of merging computational analysis with contextualized history. This study aims to investigate the current state of Artificial Intelligence adoption in historical research, its benefits and limitations in Nigeria. The study adopts a historical, phenomenological and analytical approach with a combination of primary, secondary and online sources bearing in mind historical contextualization, case studies, expert interviews, and content analysis. Findings reveal that the rapidly evolving field of Digital Humanities and Historical Computing has not only unlocked a wealth of digital historical sources (i.e. archives, libraries, museums), revealed the vast potential of Artificial Intelligence in historical research, but also identified key AI applications such as text analysis, image and audio analysis, historical reconstruction and topic modeling. The study further highlights a range of employable methodologies to harness the power of Artificial Intelligence such as Natural Language Processing, Text Mining, Sentiment analysis, and Information Extraction, among others. It is stressed that the benefits of Artificial Intelligence (AI) in historical inquiry are by no means undeniable, offering enhanced data analysis, pattern recognition, increased efficiency, improved accuracy and new insight that were previously unimaginable. However, contextual understanding gaps, data quality issues, outdated information, algorithmic bias, overreliance on quantitative methods and difficulty with ambiguity presently hinder the complete reliance on AI-generated historical research findings, casting doubts on their accuracy, validity, and overall credibility. Towards ensuring reliable historical findings, this study concludes that Artificial Intelligence must be balanced with human expertise, contextual understanding and ethical considerations. This convergence will no doubt usher in a transformative era, substantiating the digital humanities frameworks and also illustrating the theories of disruptive innovation and diffusion of innovations.

Effects Of Gamification On Senior School Students' Performance In Ilorin, Kwara State

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Abstract

This research work investigated Effects of Gamification on Senior School Students' Performance in Mathematics in South in Ilorin, Kwara State. The research design adopted was a quasi-experiment of the pre-test, post-tset non randomized control group. Purposive sampling was used to obtain a sample of two co-educational secondary schools. The instrument used for the study was Mathematics Achievement Test to measure students' achievement. Three hypotheses were formulated and tested at 0.05 level of significance. Data were analyzed using t-test and Analysis of Covariance (ANCOVA). Findings revealed that there is a significant difference in the achievement of students taught with gamification and those not taught using gamification. The researcher concluded that the utilization of gamification promotes effective teaching and learning process, thus, Mathematics teachers should be encouraged to use gamification in Secondary Education programme.

Keywords: Gamification; Achievement; Mathematics; Performance

Utilization Of Ai Tools For Educational Research Among Postgraduate Students At The University Of Ilorin

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Abstract

This study explored the utilization of AI tools for educational research among postgraduate students at the University of Ilorin, Kwara State, Nigeria. A descriptive study design was selected. This study was guided by three objectives, research questions, and null hypotheses. The sample survey included 50 postgraduate students selected across various university faculties. There was no sample due to the sizeable study population. A questionnaire vetted by three experts served as a means of data collection. Data for the research questions were reported with mean and standard deviation. An independent-sample t-test was used to test the null hypotheses at the 0.05 significance level. The findings revealed that while most postgraduate students are aware of AI tools and their potential applications in research, actual utilization remains relatively low. Only a small percentage of students reported regular use of AI-driven technologies, citing barriers such as lack of access to advanced AI software, inadequate training, and limited understanding of how to effectively apply these tools in their specific research fields.

In line with this, the study concludes that although AI tools present significant opportunities for postgraduate research, there is a pressing need for increased awareness, training, and institutional support to fully realize their potential. Recommendations include the integration of AI tool training into postgraduate curricula, the provision of access to advanced AI software by the university, and the development of workshops aimed at equipping students with the necessary skills to leverage AI technologies effectively in their research endeavors.

Keywords: Utilization, AI Tools, Educational Research, Postgraduate Students.

The Ethical Principles of Islam: A Guide for The Enhancement of AI's Ethical Capabilities

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Abstract

The contributions of Islam to the science and technology cannot be overemphasised. The religion, from its inception, especially after the revelation of the first five verses of the Glorious Qur'ān, charges human beings to explore science in order to understand nature, augment human intelligence, solve societal problems and improve literacy in the society with the cardinal aim of worshipping God in all human endeavours. Consequently, Muslim scholars have made immeasurable contributions to the growth and advancement of various fields of scientific and technological knowledge. The purpose of this paper, therefore, is to contribute to the artificial intelligence (AI) through proposition of the rich ethical frameworks of Islam so that the capabilities of AI can be enhanced with moral principles that adhere to the cultural diversity and human dignity. Through the use of qualitative research method, the principles examined from Islamic lens to contribute to the AI code of ethics include justice, fairness, societal good, privacy and many others. The findings of the study unfold that the use of Artificial intelligence cannot replace human potentials but promote subjugation of material resources to advance learning. The study recommends integration of the ethical teachings of Islam to foster AI and charges AI researchers to collaborate with the experts in Islamic studies in the development of AI so that it can be ethically balanced.

Keywords: Artificial intelligence, Islam, ethics, enhancement

How Open and Distance Learners are Using Artificial Intelligence: A Case Study of CODL, University of Ilorin, Nigeria

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Abstract:

The rapid advancement of artificial intelligence (AI) technology has revolutionized various sectors, including education. This study aims to explore the utilization of AI tools among open and distance learners at the Centre for Open and Distance Learning (CODL) at the University of Ilorin, Nigeria. By understanding how learners integrate AI into their educational practices, we seek to uncover the implications for enhancing learning experiences in ODL contexts.

Employing a qualitative descriptive approach, we conducted in-depth interviews and focus group discussions with a diverse sample of learners enrolled at CODL. This methodology allowed us to gather rich qualitative data regarding their experiences, perceptions, and interactions with AI technologies. Participants were selected based on their varying levels of engagement with AI to ensure a comprehensive understanding of the phenomenon.

Our findings indicate that learners utilize AI for multiple purposes, including personalized learning, improved access to resources, and enhanced communication with instructors and peers. Many participants reported that AI tools facilitated a more tailored learning experience, enabling them to engage with content at their own pace. Additionally, learners highlighted the efficiency gains in study management provided by AI applications. However, challenges emerged, such as limited access to technology, inadequate training on AI tools, and varying levels of digital literacy, which hindered some learners from fully leveraging these technologies.

This study underscores the transformative potential of AI in open and distance learning environments. It highlights how AI can empower learners, promote autonomy, and foster engagement. However, it also points to critical factors influencing AI adoption, including the need for institutional support, training, and infrastructure improvements.

By providing valuable insights into the intersection of AI and open and distance learning, this research offers recommendations for educators and policymakers. Addressing barriers to access and optimizing AI tools can significantly enhance the learning experiences of distance learners in Nigeria and similar contexts, ultimately contributing to improved educational outcomes.

Keywords: Artificial Intelligence, Open and Distance Learning, Qualitative Research, CODL, University of Ilorin, Learner Experience

Word Count: Approximately 350 words

Artificial Intelligence and Reduction of Human Trafficking Activities along Nigeria-Benin Republic corridor

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Abstract

Transnational crime such as human trafficking, smuggling, arms trafficking, and drug trafficking poses a significant threat to Africa's security and development. Africa's porous borders, weak border enforcement infrastructure, and limited technological capabilities create an environment where these crimes thrive. Despite efforts by African governments and international organizations to secure borders, human trafficking remains a persistent problem. To address these challenges, there is growing interest in using Artificial Intelligence (AI) technologies to enhance border security by detecting and reducing criminal activities across borders. The study seeks to answer the question: How can AI technologies be effectively used to reduce the activities of human trafficking and enhance border security along Nigeria-Benin Republic corridor? An exploratory research design would be used in the study. The preliminary outcome of the study showed that key AI technologies that would enhance border security and reduce human trafficking are not effectively utilized as well as lack of technology know-how among the border officials at the border. It is recommended that there should be provision and utilization of AI enhanced technologies at both borders as well as training and redeployment of border security personnel who are versatile in the use of AI technologies so as to reduce the activities of human trafficking at the borders.

Keywords: Human Trafficking; Border; Artificial Technology

Artificial Intelligence and the Future of Interactive Teaching and Learning: Exploring Experience of Nigerian University Lecturers

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Abstract

Artificial Intelligence (AI) is gradually influencing the future of education in Nigerian Universities, especially in improving interactive teaching and learning. This study investigates university lecturers' experiences in Nigeria regarding the integration of AI in interactive teaching and learning, with the aim of exploring the current use of AI in interactive teaching and learning, identify the challenges faced using AI for teaching and learning practices. Four research questions were asked and answered in the study. Through a mixed-methods approach, including surveys and interviews, the research explores how AI is being used to engage students, improve instructional quality, and foster collaborative learning environments. The study also examines the challenges lecturers' face, such as limited resources, technical barriers, and the readiness of Nigerian universities to support AI-driven education. The population of the study comprises of all lecturers in both private and public universities in Nigeria across various academic disciplines, convenient/snowball sampling technique was use to select lecturers from six universities in North and South zone using Google form. Descriptive statistics and inferential analysis was used to analysis all quantitative data while thematic analysis was adopted for qualitative data collected for the study. Leveraging on the experiences of Nigerian lecturers across various disciplines, the study revealed that; Moodle, Google Classroom, Microsoft Team, ChatGBT and Zoom with AI integration are some of the AI tools commonly used by lecturers for teaching in the universities in Nigeria. Also, that; limited infrastructure and internet access, resistance to change are among the challenges faced by lecturers when using AI for interactive teaching. Based on the findings, the study concludes that; lecturers in Nigerian Universities uses AI tool for interactive teaching encountered some challenges. The study recommends; the university management to do more in ensuring that lecturers and students have unhindered access to internet at all time within the university environment.

Keywords: Artificial Intelligence, Future, Interactive, teaching, learning, experience, and lecturers.

Artificial Intelligence And The Future Of Education: Case Study Of Selected Universities In Nigeria And Rwanda

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Abstract

It has been established that Artificial Intelligence (AI) driven systems otherwise known as tools can be used to enhance educational delivery and improve efficiency. AI-driven systems can tailor educational content to individual student needs, providing customized learning pathways and pacing based on student performance and preferences otherwise known as personalized learning. AI tools like machine learning algorithms and natural language processing assist in automating assessment tasks, such as grading exams, assignments, and even essays, reducing faculty workload and delivering faster feedback to students. The paper examines the relevance of Artificial Intelligence to education industry in the nearest future. The focus of the paper is on AI and future of education (specifically, Higher Education) with reference to selected universities in Nigeria and Rwanda. The research design for the study is mixed methods. Sample would be drawn from Academic and Administrative personnel from the selected universities. The variables to be examined in this research resolve around, state of AI in Higher Education Institutions (HEI) in Nigeria and Rwanda with particular reference to areas of AI applicability in HEIs, level of AI utilization among Academic and Administrative personnel in selected universities, level of AI policy activation in the selected universities and the need for AI literacy among Academic and Administrative personnel of the selected universities. Recommendations would be made based on our research findings.

Keywords: Artificial Intelligence, Education, Higher Education Institutions, Nigeria, Rwanda.

Assessing Prevalence of Multidrug-Resistant Bacteria in Respiratory Tract Infections in Ilorin and effect of Essential Oil of Eucalyptus globulus

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Abstract

Purpose and Objectives: Multidrug-resistant bacteria in lower respiratory tract infections pose escalating concern in low and middle-income countries, urging exploration of natural alternatives. The current investigation assessed antibacterial efficacy of eucalyptus essential oil against a panel of multidrug-resistant bacteria isolated from sputum samples of 200 patients diagnosed with LRTIs at University of Ilorin Teaching Hospital (UITH), a foremost referral centre in Ilorin, Nigeria.

Summary of methodology: Bacteria were isolated by streak plate technique, characterized by colonial and cellular morphology followed by biochemical profiling and identified through Polymerase Chain Reaction (16sRNA). Antibacterial susceptibility to conventional antibiotics was evaluated by disc diffusion assay. Essential oil was obtained by hydro-distillation and efficacy determined by agar well method.

Key findings/Results: Recovery of 23 isolates revealed Bacillus cereus and Providencia rettgeri as the predominant species, with 14 identified as multi-drug resistant. Providencia vermicola JN092794.1demonstrated notable resistance to 12 out of 15 conventional antibiotics. Conversely, Providencia rettgeri KU870748.1exhibited the highest susceptibility, particularly evident in its sensitivity to nitrofurantoin (45.6 $\pm$0.2 mm) as indicated by standard antibiogram. In comparison to conventional antibiotics, eucalyptus essential oil displayed suboptimal activity (12.67 $\pm$ 0.33 mm) against isolates.

Conclusion and Recommendation This research identified multidrug-resistant bacteria in LRTI patients at Ilorin's main health facility which may have implications for increased morbidity and mortality rates. Conclusively, eucalyptus essential oil did not achieve anticipated efficacy against isolates, nonetheless, purifying the essential oil holds promise for enhancing activity whether independently or in synergy with other plant-derived resources.

Keywords: Respiratory infection, Eucalyptus, Resistant bacteria, Sputum, PCR

Assessing Prevalence Of Multidrug-Resistant Bacteria In Respiratory Tract Infections In Ilorin And Effect Of Essential Oil Of Eucalyptus Globulus

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Abstract

Purpose and Objectives: Multidrug-resistant bacteria in lower respiratory tract infections pose escalating concern in low and middle-income countries, urging exploration of natural alternatives. The current investigation assessed antibacterial efficacy of eucalyptus essential oil against a panel of multidrug-resistant bacteria isolated from sputum samples of 200 patients diagnosed with LRTIs at University of Ilorin Teaching Hospital (UITH), a foremost referral centre in Ilorin, Nigeria.

Summary of methodology: Bacteria were isolated by streak plate technique, characterized by colonial and cellular morphology followed by biochemical profiling and identified through Polymerase Chain Reaction (16sRNA). Antibacterial susceptibility to conventional antibiotics was evaluated by disc diffusion assay. Essential oil was obtained by hydro-distillation and efficacy determined by agar well method.

Key findings/Results: Recovery of 23 isolates revealed Bacillus cereus and Providencia rettgeri as the predominant species, with 14 identified as multi-drug resistant. Providencia vermicola JN092794.1demonstrated notable resistance to 12 out of 15 conventional antibiotics. Conversely, Providencia rettgeri KU870748.1exhibited the highest susceptibility, particularly evident in its sensitivity to nitrofurantoin (45.6 $\pm$0.2 mm) as indicated by standard antibiogram. In comparison to conventional antibiotics, eucalyptus essential oil displayed suboptimal activity (12.67 $\pm$ 0.33 mm) against isolates.

Conclusion and Recommendation This research identified multidrug-resistant bacteria in LRTI patients at Ilorin's main health facility which may have implications for increased morbidity and mortality rates. Conclusively, eucalyptus essential oil did not achieve anticipated efficacy against isolates, nonetheless, purifying the essential oil holds promise for enhancing activity whether independently or in synergy with other plant-derived resources.

Keywords: Respiratory infection, Eucalyptus, Resistant bacteria, Sputum, PCR

Application of Artificial Intelligence and Machine Learning in Predicting Customer Behaviour

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Abstract

The analytic evolution of artificial intelligence (AI) and machine learning (ML) has emerged and become dominant in predicting customer behaviour. In the competitive e-commerce landscape, comprehending customer behaviour is paramount for businesses to thrive. This study explores the application of the random forest algorithm, a potent data mining technique, to predict customer behaviour. The Women's Clothing E-Commerce dataset from Kaggle is was leveraged and feature selection and evaluation techniques were used to train the random forest model. Harnessing the prowess of this algorithm, the objective is to unearth invaluable insights that can drive informed decision-making and enhance customer experiences. A flexible forecasting feature is developed that generates precise predictions for individual customer values. The study encompasses three phases: data pre-processing, algorithm training and evaluation, and the development of a web application using Streamlit and Visual Studio Code. The application is hosted on a render cloud platform to ensure seamless accessibility.

Keywords: Artificial Intelligence; Machine Learning; Customer Behaviour; E-commerce

Artificial Intelligence (AI) Usage and Its Implications on Health and Wellness of Undergraduates in University of Ilorin

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Abstract

Artificial Intelligence (AI) is a set of gadgets that enable computer/machine to perform a variety of advanced function which resembles human-like capability including reasoning and creativity. It is used in variety of areas and discipline which include health and wellness. It is observed that many people especially students seem to consult the machine for health related information, including diagnosis of illness. The objectives were to examine if AI usage will have any significant implication on health and wellness, mortality rate, morbidity rate, self-medication and doctor consultation.
A descriptive survey research design involving all students of the University of Ilorin was used. A sample of 400 respondents was used for the study. A multistage sampling procedure was used for the study. A questionnaire which was validated by 3 experts and tested for reliability using split-half procedure was used for data collection. Cronbach Alpha statistics was used and a reliability correlation coefficient of 0.85 was obtained. The instrument was administered by the researcher and three trained research assistants. The data collected was analysed using both descriptive and inferential statistics of chi-square @ 0.05 alpha level.
The finding revealed that;
AI usage have implication on health and wellness;
AI usage have implication on the mortality and morbidity rate;
AI usage have implication on self-medication; and
AI usage have implication on rate of doctor consultation.
The study concluded that that AI usage have implication on health and wellness, increases mortality and morbidity rate, makes students to engage in self-medication and reduces the rate at which students patronise medical doctor for consultation. It is therefore recommended that students should be informed of the implication of AI usage on health and wellness, discourage students from self-medication and encourage them to patronise hospital when they are sick for medical consultation.

Keywords: Artificial Intelligence, Health and Wellness, Self-medication, Doctor Consultation

Faculty Of Education Postgraduate Students' Level Of Anxiety And Competence In The Use Of Artificial Intelligence In Research In Kwara State, Nigeria

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Abstract

This paper examined Faculty of Education postgraduate students' level of anxiety and competence in the use of artificial intelligence in educational research. The research design adopted in this study was descriptive survey research design. The population was all postgraduate students in the Faculty of Education from all universities in Kwara State. Stratified, simple random and convenience sampling techniques were used in the study to sample postgraduate students from Arts and an adapted questionnaire titled "Faculty of Education postgraduate students' attitude towards the use of artificial intelligence in research". The validity of the instrument was carried out by the Social Sciences Education from all universities in Kwara State. The instrument used in the study was experts and reliability coefficient of 0.84 and 0.78 were recorded. Percentage was used to describe the demographic characteristic of the respondents while Mean and Standard Deviation were used to answer all research questions. Pearson Product Moment Correlation (PPMC) was used to answer the hypotheses in the study. The finding of the study showed that Faculty of Education Postgraduate students' level of anxiety and competence in the use of AI for research was moderate. Furthermore, the finding of the study revealed that was significant relationship between postgraduate students' level of anxiety and competence and the use of AI for research in universities in Kwara State. The study also discovered that there was significant relationship between postgraduate students' level of anxiety, competence and their use of AI in research based on gender. It was concluded in the study that anxiety developed by the students towards the use of AI for research affects their competence. It was therefore, recommended in the study that universities management should organize conferences, seminars and workshops on the significance of AI in research works.

Key Words: Anxiety, Artificial intelligence, Competencem Postgraduate students

Dynamics Of Digital Transformation And Internationalization On The Environmental Sustainability Of Smes

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Abstract

As climate change continues to impact economies and communities worldwide, businesses, including Small and Medium-sized Enterprises (SMEs), are increasingly pressured to adopt environmentally sustainable practices while they pursue growth opportunities in international markets. Digital transformation has emerged as one of the drivers for environmental sustainability and international expansion. Grounded in the dynamic capability theory, the study examined the influence of digital transformation on environmental sustainability through SMEs internationalization as a mediator. The data was pulled from 400 owner/managers of SMEs in the Accra metropolis using a self-administered questionnaire. Using the explanatory-correlational design, the hypotheses were tested with the help of the partial least squared equation modeling found in SmartPLS vs 4. The findings revealed that digital transformation has a significant positive relationship with environmental substantiality and SMEs internationalization. Moreover, the study found that international expansion and environmental sustainability are positively linked. It was further discovered that SMEs internationalization initiatives significantly mediate the link between digital transformation and environmental sustainability. In light of these findings, SMEs are admonished to invest in digital technologies for international growth and to meet the rising demand for environmental sustainability at the global level to strengthen their competitiveness. **Therefore, d**igital transformation offers a pathway for SMEs to achieve international success by aligning with global sustainability standards for overall business prosperity.

Keywords: Digital Transformation, Environmental Sustainability, SMEs, Internationalization, Climate Change

Perceived Ease-Of-Use And Usefulness As Correlates Of Artificial Intelligence Use For Indigenous Knowledge Management In A Nigerian Public Library

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Abstract

This study investigates perceived ease-of-use and usefulness as correlates of Artificial Intelligence (AI) use for indigenous knowledge management (IKM) in a Nigerian public library. It raises five research questions while three null hypotheses were tested at 0.05 significant level. This study adopts correlational design. Sixty-four (64) personnel of Kwara State Library Board, Ilorin constitute the population of this study. Since the population is minimal and can be covered by the researchers, total enumeration sampling was adopted. A self-developed questionnaire was used to obtain data from the respondents. From the 64 copies of the questionnaire administered, only 33 (51.48%) were fully filled and adequate for analysis. Findings revealed that the respondents generally perceived AI as easy to use for IKM ($\bar{X}$G = 2.76); useful for IKM ($\bar{X}$G = 3.09), while its tools, such as ChatGPT and AI text classifier, can be used to manage IK ($\bar{X}$G = 2.52). Findings further revealed that the respondents felt that AI was beneficial to IKM ($\bar{X}$G = 3.20) and agreed that there were challenges confronting its usefulness for IKM ($\bar{X}$G = 3.20). The results from the tested hypotheses revealed that there is a significant relationship between perceived ease-of-use and AI use for IKM (r =0.228 and 0.210**, p > 0.05); there is a significant relationship between perceived usefulness and AI use for IKM (r = -0.252 and 0.164**, p > 0.05) and a significant relationship between perceived ease-of-use and usefulness and AI use for IKM (r = -0.069 and 0.708 and 0.164**, p > 0.05). This study concludes that there are correlations between perceived ease-of-use and usefulness of AI for IKM by librarians at the Kwara State Library Board. One of the recommendations of this study is that Kwara State Government should provide the necessary ICT infrastructure for the Kwara State Library Board.

Keywords: Artificial Intelligence, Indigenous knowledge management, Perceived ease-of-use, Public library, Nigeria, Usefulness

Exploring the Integration of Artificial Intelligence in Teaching Arabic Islamic Literature in Higher Education: A Preliminary discussion

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Abstract

With the growing need for innovation in educational methods, AI holds potential for advancing the study of Islamic literature (Aladabul Islami) by offering new tools for textual analysis, personalized learning, and content translation. However, the application of AI in this field raises concerns regarding interpretive accuracy and cultural sensitivity, particularly in understanding the nuanced theological and literary dimensions of Islamic texts. The study addresses the limited exploration of AI within Islamic literature education, aiming to bridge the gap by examining both its benefits and potential challenges. Specifically, this study seeks to evaluate AI's capacity to enhance comprehension, streamline instruction, and support individualized learning within the study of Islamic texts while upholding the integrity of Islamic cultural values. The study employs a qualitative methodology, gathering data through literature review and expert interviews with educators, AI developers, and Islamic literature scholars. Analysis of these data sources reveals that AI tools, such as Natural Language Processing (NLP) for text analysis and machine learning for personalized learning experiences, can enrich educational outcomes by enabling deeper engagement with Islamic literature. However, findings also highlight challenges, such as cultural biases in AI algorithms and limitations in capturing complex linguistic and theological nuances, which could impede accurate interpretation. The paper recommends a collaborative approach in developing AI tools, involving scholars of Islamic literature to ensure these tools are culturally sensitive and aligned with the unique interpretative needs of Islamic texts. It advocates for further research on adaptive AI models tailored to Islamic literature to support meaningful and respectful educational experiences.

Key Words: Artificial Intelligence, Teaching Arabic Islamic Literature, Higher Education

The double-edged sword of LMS in Basic Education Programme: Teacher Lived Experiences with KwaraLearn

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Abstract

Purpose: This paper examines the experiences of fourteen primary school teachers in Kwara State to understand the uniqueness of KwaraLearn LMS in education. It explores the benefits and challenges of the integration of deploying 21st-century technology to schools to revolutionize teaching, learning and administrative practices for public primary school teachers. A qualitative phenomenological approach was used for the study.

Objectives: Two research questions were raised to investigate the impact of the LMS on teaching and the challenges faced by teachers.

Methodology: Teachers were interviewed in-person to elicit their views, their responses were audio-taped and further validated with handwritten notes for transcription. The data were inductively analyzed to identify the themes that help to tell their stories.

Findings: The results of this study show a significant impact of KwaraLearn on their teaching practices towards transitioning from manual methods for lesson preparation to a comprehensive digital platform. These shifts have assured consistency in lessons and instructions with strict adherence to the daily teaching schedule for each period; hence, allowing pupils of the same grade in public primary schools to learn the same content simultaneously, ensuring uniformity and equity in education. While participants acknowledged KwaraLearn potential to enhance teaching, learning, and administrative tasks; concerns were raised about effective time management, due to the strict schedule of classes and daily attendance requirements. Financial constraints caused by high transportation costs and meager salaries have further compounded these challenges, impacting their well-being and motivation.

Recommendation: The study recommends the need to have a flexible scheduling option to alleviate time management pressures on teachers.

Keywords: Learning Management Systems, Teachers, KwaraLearn, Nigeria.

AI-Powered Learning in the Global South: A Case Study of Student Experiences in Ghanaian Higher Education

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This study has examined how artificial intelligence (AI) shapes the transformation of higher education at the University of Cape Coast (UCC), Ghana, within the Global South by way of student narratives. The integration of artificial intelligence technologies in education presents an amazing opportunity to solve continuous challenges in impoverished areas. The integration, acceptability, and effects of artificial intelligence-based technologies for student learning are investigated in this research using the Unified Theory of acceptability and Use of Technology (UTAUT2) paradigm. Using a quantitative approach, analysing the relationships among students' views of academic work value, their behavioural goals, and their actual use of AI technologies. The results highlight the requirement of enjoyment in the learning process since they clearly link hedonic motivation with student interaction with artificial intelligence. Social influence and effort expectancy were main factors influencing acceptance of artificial intelligence systems; habit and facilitation conditions affected ongoing use. Confirmatory factor analysis demonstrated good model fit and construct dependability with over 78% of the variance in behavioural intention and actual use explained, therefore showing AI's potential to improve educational experiences across socioeconomic contexts. This paper offers policymakers, educators, and technologists focused on using artificial intelligence to support fair, high-quality education in the Global South incisive analysis in addition to actual data from an under-represented area. This study would enable legislators and curriculum designers to build AI-based learning environments sensitive to the requirements of children in disadvantaged areas. This case study shows UCC as a shining example by describing actions to be taken to remove obstacles to AI adoption and leverage technology to eventually enhance education.

Keywords: AI in Education, Global South, Higher Education, Student Experience, Technology Adoption.

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The Role of Artificial Intelligence in Enhancing Research in Translation Studies: Opportunities and Challenges

By

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Abstract

Artificial Intelligence (AI) is increasingly recognized as a transformative force in enhancing research within Translation Studies. This paper examines the role of AI-driven tools, such as machine translation systems and Natural Language Processing (NLP) software, in facilitating translation research. AI offers opportunities to improve translation accuracy, streamline research workflows, and develop more efficient linguistic analysis and cross-language communication methodologies. However, despite these benefits, several challenges hinder the full integration of AI into Translation Studies research, particularly in higher education institutions in Nigeria. The study highlights the underutilization of AI tools in Nigeria, where limited access to infrastructure and a lack of specialized training impede progress. While scholars from institutions such as the University of Lagos and Ahmadu Bello University have begun exploring AI's potential, these efforts are still nascent and face challenges related to ethical concerns, data privacy, and the cultural sensitivity of automated translation systems. Additionally, AI's dependence on extensive and diverse linguistic datasets poses further challenges for accurate translation in less-resourced languages, including many African languages. Through a review of current literature and expert interviews, this paper explores both the opportunities and challenges of using AI in translation research. It concludes by suggesting a framework for fostering interdisciplinary collaborations between linguists, computer scientists, and policymakers to ensure AI's effective integration into Translation Studies. Moreover, the paper emphasizes the need for investment in AI infrastructure, ethical guidelines, and capacity-building initiatives to maximize the potential of AI in this evolving field.

Keywords: Artificial Intelligence, Enhancing, Research, Translation Studies, Opportunities, Challenges.

Evaluating Metal Complexes' Antibacterial Effects On Bacterial Strains Isolated From Indoor Air In 30 Unilorin Offices

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Abstract

Microbial contamination indoors significantly impacts air quality and human health. This study focused on microbial contamination in indoor environments, specifically in 30 offices at the University of Ilorin. The research aimed to isolate, characterize, and identify bacteria present in the indoor air. Additionally, the antibiotic sensitivity of the isolated bacteria to four metal complexes was examined. Two offices were sampled in each of the fifteen faculties using the settling plate technique over a five-week period. The bacterial colonies were counted, expressed in cfu m^{-3}, and purified for identification using molecular tools based on 16S rRNA. Four metal complexes (Co(suf)AMZ, Mn(suf)AMZ, Cu(suf)AMZ, and Ni(suf)AMZ) were tested for antibiotic sensitivity using the agar well diffusion method. The study found three *Bacillus* species and one *Pseudomonas* species among the isolated bacteria. *Bacillus pumilus* was consistently present in all offices throughout the entire sampling period. *Pseudomonas* sp. and *Bacillus subtilis* appeared in all offices sampled in the fifth week. All the isolates are opportunistic pathogens. The total bacterial count ranged from 215 cfu m^{-3} to 11,164 cfu m^{-3}. Metal complexes Co(suf)AMZ and Ni(suf)AMZ did not inhibit *Bacillus altitudinis*, while Ni(suf)AMZ, Mn(suf)AMZ, and Cu(suf)AMZ inhibited the growth of *Bacillus pumilus*. The environmental conditions of the offices showed a maximum temperature of 36.0 ºC, a minimum of 27.1 ºC, a maximum relative humidity of 54±3.5 %, and a minimum of 30±0.7 %. The study recommends proper sanitation in offices to reduce the risk of opportunistic infections associated with the identified bacteria and enhancement of the complexes.

Keywords: *Bacillus* sp*., Pseudomonas* sp., Antibacterials, Indoor air, Metal Complex., Environmental and experimental biology

Artificial Intelligence and the Future of Arabic Education in Nigeria: Opportunities, Challenges, and Prospects for Integration

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Abstract:

The integration of Artificial Intelligence (AI) into Arabic education in Nigeria presents both significant opportunities and notable challenges. As global educational systems evolve, AI has the potential to transform how Arabic is taught, learned, and preserved in Nigerian institutions. This study explores the current state of Arabic education in Nigeria, identifying areas where AI-driven tools, such as Natural Language Processing (NLP) and machine translation systems, could enhance language instruction, curriculum design, and assessment. Despite these opportunities, several challenges hinder the widespread adoption of AI in Arabic education. These include inadequate infrastructure, limited access to AI technology, and a lack of teacher training in using AI tools effectively. Furthermore, concerns about the cultural and linguistic accuracy of AI-powered tools raise important ethical considerations in the context of preserving the integrity of the Arabic language in education. The study also highlights early efforts by Nigerian institutions such as the University of Ibadan and Ahmadu Bello University, which have started exploring the potential of AI in education, though these initiatives are still in their infancy. Through a review of recent literature and interviews with educators and policymakers, this paper proposes strategies for overcoming barriers and maximizing the benefits of AI integration. It emphasizes the need for interdisciplinary collaborations between educators, technologists, and policymakers to ensure that AI can support the future of Arabic education in Nigeria. In conclusion, while AI presents a promising future for Arabic education, achieving its full potential will require substantial investment in infrastructure, teacher training, and policy development. National efforts, such as those supported by UNESCO, must prioritize these areas to bridge the gap between AI's potential and its current underutilization in Arabic education.

Keywords: Artificial Intelligence, Arabic Education, Nigeria, Machine Translation, Education Technology.

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Integrating Artificial Intelligence With Augmented And Virtual Reality For Collaborative Senior Secondary School Science Learning In Ilorin, Nigeria

Sub-theme - Artificial Intelligence and future of Education

By

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Abstract

The integration of Artificial Intelligence (AI) with Augmented Reality (AR) and Virtual Reality (VR) has the potential to transform collaborative science learning in secondary schools. Hence, this study focused on integrating AI with AR and VR for collaborative senior secondary school science learning in Ilorin, Nigeria. This research explores how AI can personalize and adapt AR/VR experiences to individual learning needs while fostering real-time collaboration among students. The study also examines the current state of AI, AR, and VR technologies in secondary schools, assessing their availability and utilization by science teachers, using a descriptive survey research design. Simple random sampling technique was used to select 100 secondary school science teachers. From three specific purposes of the study, three research questions were raised to guide the study. Data for the study were collected using a structured questionnaire titled "integration of Artificial Intelligence with Augmented Reality and Virtual Reality Tools Questionnaire (IA^2RVRTQ)" with V clusters. The instrument was validated by two lecturers in the department of science education, and one lecturer from department of educational technology, University of Ilorin, Nigeria and tested for reliability using Cronbach's Alpha formula and was found to be 0.76 reliable, then each cluster reliability coefficient were 0.78, 0.76, 0.74, 0.77 and 0.75. The descriptive statistics of mean and standard deviation was used to answer the research questions. The findings from the study reveal that, while AR/VR tools are increasingly available, their integration with AI remains limited, largely due to infrastructure challenges and insufficient teacher training. However, when implemented effectively, AI-enhanced AR/VR can significantly improve student collaboration, deepen comprehension of complex science concepts, and provide personalized learning experiences. The study recommends targeted teacher training, policy support, and curriculum integration to maximize the potential of AI-driven AR/VR technologies in science education.

Keyword: Artificial Intelligence, Augmented Reality, Virtual Reality and Collaborative Learning

An Assessment Of The Perceived Effects Of Artificial Intelligence-Powered Health Education Platforms On The Health Of In-School Adolescents In Kwara State, Nigeria

Keywords: AI-powered health platforms, in-school adolescents, health education, mental health

SUB-THEME: Artificial Intelligence, Health and wellness

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ABSTRACT

With the growing adoption of AI in education, particularly for promoting health literacy, it is essential to understand its impact on physical, mental, and social well-being. This study assessed the perceived effects of Artificial Intelligence (AI)-powered health education platforms on the health of in-school adolescents in Kwara State, Nigeria. Specifically, the study explored the perceived effects of Artificial Intelligence-powered health education platforms on the physical, mental and social health of in-school-adolescents as well as factors that shaped their perceptions.

A descriptive cross-sectional survey was employed for data collection. Population comprised all in-school adolescents in senior classes from public and private secondary schools in Kwara State. Multistage sampling procedure was adopted to select 450 adolescent participants. Data was collected using structured questionnaires which had been subjected to both validity and reliability tests. Descriptive statistics, chi-square tests, and multiple regression analysis were conducted to analyze data collected.

Key findings showed that **68%** of respondents perceive AI-powered platforms as having a positive impact on their mental health, while **55%** report improved social health. However, only **47%** indicate that the platforms significantly influence their physical health. Regression analysis shows that socioeconomic status

and access to technology are significant predictors of positive perceptions ($p < 0.05$). In contrast, accessibility and ease of use were found to moderate engagement with these platforms.

Based on these findings, it is recommended that policymakers and health educators prioritize equitable access to AI-powered platforms, particularly in underserved areas. Additionally, content should be tailored to address adolescents' specific health needs, ensuring ease of use and relevance. Further research is suggested to explore long-term behavioral outcomes associated with the use of these platforms.

XXX-X-XXXX-XXXX-X/XX/$XX.00 ©20XX IEEE Applying Q-learning to Continuous State and Action Spaces in Soccer Simulations Mamadou Jean Baptiste Niassy Science and Technology Universite Numerique Cheikh Hamidou Dakar,Senegal mamadoujeanbaptiste.niassy@unchk.ed u.sn Abstract— This paper investigates the application of Qlearning in a soccer simulation involving continuous state and action spaces. The scenario focuses on an agent tasked with kicking a ball toward a goal, where variables like distance and orientation are discretized to allow for the application of Qlearning. Key challenges, such as managing continuous features and dealing with delayed rewards, are addressed. The results show that incorporating orientation alongside distance improves performance, but challenges remain in efficiently discretizing continuous variables. Keywords—Q-Learning, Soccer simulation,Continuous states I. INTRODUCTION - Background: Reinforcement learning (RL), especially Q-learning, has been extensively used in discrete environments due to its simplicity and effectiveness in solving Markov decision processes (MDPs) [1]. However, many real-world problems, such as in robotics and sports simulations, involve continuous state and action spaces, which present significant challenges for traditional Qlearning approaches [2]. - Motivation: Soccer simulations serve as a compelling example of environments where continuous variables, like distance and orientation, need to be discretized for Q-learning to function effectively. Past research has successfully applied RL to multi-goal soccer tasks [3], but there is a need to explore simpler, single-task scenarios like kicking a ball towards a goal. - Contributions**: This paper proposes the discretization of continuous features such as distance and orientation for Q-learning in a kicking scenario. We also investigate the impact of incorporating orientation in the agent’s decision-making process, and present results that highlight the effectiveness and limitations of this approach II. RELATED WORK Several studies have examined how to adapt Q-learning to handle continuous state and action spaces, often through techniques such as discretization or function approximation. One common approach is discretization, where continuous variables are divided into intervals, enabling the application of traditional tabular Q-learning. This method, while simple, faces challenges in complex environments with highdimensional state spaces, as the number of state-action pairs increases exponentially with finer discretization [1, 2]. For example, in a robotic control task, discretizing both position and velocity into many intervals may become computationally infeasible. To overcome these issues, researchers have explored function approximation techniques, which allow Q-learning to generalize across continuous spaces without explicitly storing every state-action pair. Deep Q-learning (DQN) is one of the most notable advancements in this area, using neural networks to approximate Q-values and handle continuous state spaces [3, 4]. Mnih et al. [5] demonstrated the effectiveness of DQNs in playing Atari games, and this approach has since been extended to various robotics tasks. However, the challenge with DQNs lies in applying them to continuous action spaces, which led to the development of Deep Deterministic Policy Gradients (DDPG) by Lillicrap et al. [6]. DDPG combines Q-learning with actor-critic methods, enabling learning in environments with continuous actions by approximating policies using neural networks. Our work builds on these approaches by employing discretization, as it simplifies implementation while retaining sufficient accuracy for a single-agent kicking scenario in a simulated soccer environment. While

function approximation methods like DQN are powerful, discretization remains an effective choice for controlled environments with specific tasks [7, 8]. Reinforcement learning has been applied to a variety of soccer-related tasks, particularly in the context of multiagent systems. One of the most influential works is that of Riedmiller et al. [9], who applied reinforcement learning to a soccer-playing robot team in the RoboCup competition. Their work focused on complex, multi-agent interactions, including passing, dribbling, and shooting in a cooperative team setting. By employing RL in such dynamic and competitive environments, their approach demonstrated how Q-learning and other RL algorithms could be scaled up to handle the complexities of multi-agent collaboration and adversarial tasks [10]. In contrast to Riedmiller's multi-agent focus, our paper addresses a more controlled, single-agent scenario, specifically focusing on the task of kicking a ball to a goal. While the problem is simplified, it allows for a more granular study of Q-learning in continuous state and action spaces, particularly in how discretization affects performance. This aligns with other research that isolates specific soccer tasks to analyze RL performance in controlled settings. Additionally, our use of an epsilon-greedy policy for exploration-exploitation balance draws on earlier works in RL that emphasize the importance of controlled exploration to improve agent learning in competitive environments. By concentrating on a specific task, we aim to contribute insights on how to adapt Q-learning to continuous spaces, while also considering future expansions into more complex multi-agent scenarios. III. PROBLEM DEFINITION AND METHODOLOGY Reinforcement learning (RL), particularly Qlearning, is traditionally designed for discrete environments. Applying Q-learning to environments with continuous state and action spaces poses challenges due to the need for discretization. In this work, we focus on a soccer-like scenario where an agent must kick a ball to score a goal, adapting Q-learning to manage the continuous state-action space. The continuous variables, such as the distance between the ball and the goal, must be discretized to apply Q-learning effectively [1, 2]. The problem is framed as follows. The agent must learn an optimal kicking strategy by selecting appropriate force and direction to move the ball toward the goal. Qlearning is limited to discrete state-action pairs, making it necessary to discretize continuous variables like distance and orientation[3]. A common issue in reinforcement learning is balancing exploration (trying new actions) with exploitation (using learned strategies). We implement an epsilon-greedy policy to manage this tradeoff [4]. Our goal is to train the agent to maximize cumulative reward by reducing the distance to the goal, ultimately leading to successful goalscoring. The continuous state space consists of variables such as the distance between the ball and the goal, which we discretize into intervals to enable Q-learning to process them. This approach has been commonly used to handle continuous environments in reinforcement learning [5, 6] IV. KICK SCENARIO A. State Action Space The state space is defined by the combination of discretized distance and orientation, which mirrors approaches used in other continuous-space applications of Qlearning [12].The state depend on two distances. The first distance is related to the relative position ball and the goalkeeper position. and the second one is determined between the ball initial position and the goalkeeper position. That's give the equation below $dist = |Goalx - Ballx \mid dist\_init = |Goalx - Ballinitx \mid$ dist represents the current horizontal distance between the ball's position (ballX) and the target goal's X-coordinate. dist_init represents the initial horizontal distance between the main agent's initial position with the ball and the target goal's X-coordinate. To compute the normalized distance as a fraction of the initial distance, the equation is: $Normalized\ distance = dist\ dist\_init$ This normalized distance gives a relative value of how close the current position of the ball is to the target goal compared to the initial position. The feature distance is computed as the ratio of the current distance to the initial distance, which normalizes the value into a range between 0 and 1. This feature is then used to determine the agent's state in the state table. $feature\ distance = dist\ dist\_init$ When the ball is at its initial position, the feature value is 1, indicating the ball is at the starting position. As the ball gets closer to the goal ,the feature value approaches 0, indicating proximity to the goal. The feature value is then used in the state table to classify the agent's state based on a set of predetermined intervals State = { if $\mathbf{0} \leq$ feature < 0.2 $\boldsymbol{S2}$ if $\mathbf{0}.\ \mathbf{2} \leq$ feature < 0.4 $\boldsymbol{S3}$ if $\mathbf{0}.\ \mathbf{4} \leq$ feature < 0.6

$\boldsymbol{S4}$ if $\mathbf{0.6} \leq$ feature < 0.8 $\boldsymbol{S5}$ if $\mathbf{0.8} \leq$ feature < 1 $\boldsymbol{S6}$ feature ≥ 1 B. Q Learning implementation A Q-table is constructed by mapping the agent's discretized states to possible actions. The Q-learning algorithm is used to update the table based on feedback from the environment [1], with the agent utilizing the epsilon-greedy policy to balance exploration and exploitation [14]. The agent receives rewards based on how close the ball reaches the goal, a reward structure often used in similar RL problems to encourage goal achievement [15]. B. Challenge and improvements Initially, the state space only included the distance variable, which led to suboptimal performance, as the agent was unable to account for the ball's orientation relative to the goal. This limitation is consistent with issues noted in other RL tasks that require spatial awareness . Incorporating orientation into the state space allows the agent to make more informed decisions regarding the direction and force of the kick, resulting in improved goalscoring accuracy . Rewards are assigned not immediately after kicking, but after achieving proximity to the goal or scoring. Kicking rewards only once a goal is scored or episode ends, emphasizing long-term strategy. V. RESULTS AND DISCUSSION The simulation experiments produced four key graphical outputs: reward, mean reward, distance to the goal, and mean distance to the goal after kicking. Each of these provides insights into the agent's learning progress and effectiveness of the Q-learning algorithm. Reward: The reward graph shows the immediate feedback the agent receives after each action. As the experiments progressed, we observed an increase in the reward values, indicating that the agent was learning to take more successful actions in order to score goals. Mean Reward: The mean reward is calculated as the average reward divided by the current time step. This metric helps smooth out variations and highlights long-term trends in the agent's performance. The upward trend in the mean reward demonstrates the agent's gradual improvement in consistently making better decisions over time, balancing exploration and exploitation effectively. Distance to Goal: The distance-to-goal graph tracks how close the ball is to the goal after each kick. Over the course of the simulations, this distance consistently decreased, illustrating the agent's ability to optimize its kicks, with more accurate and forceful actions leading the ball closer to the goal. Mean Distance to Goal: The mean distance to goal provides a more stable representation by averaging the distance over the steps, offering a clearer picture of the agent's overall performance. A reduction in the mean distance over time highlights the agent's increasing proficiency in aiming and delivering kicks that improve its chances of scoring. These graphics collectively confirm that the Qlearning algorithm, guided by an epsilon-greedy policy, effectively enabled the agent to learn the optimal kicking strategy. The improvements in both reward and distance metrics indicate that the agent not only learned to kick the ball toward the goal but also optimized its actions progressively throughout the experiments. VI. CONCLUSION This paper demonstrates that Q-learning can be successfully adapted to soccer simulations involving continuous state and action spaces through the use of discretization techniques. By discretizing features such as distance and orientation, we enabled the application of tabular Q-learning in an environment where traditional discrete approaches would be insufficient. In the specific case of a single-agent kicking scenario, the experimental results show that the agent was able to learn an effective kicking strategy, consistently reducing the distance to the goal with each trial. The incorporation of the epsilon-greedy policy helped balance exploration and exploitation, allowing the agent to improve its performance as the simulation progressed. One of the key insights from this work is the significance of incorporating orientation features in addition to distance. Orientation plays a critical role in determining the direction and accuracy of the agent's kick, and when it was included as a feature, the agent demonstrated a marked improvement in its ability to score goals. This aligns with prior research that emphasizes the importance of spatial and directional context in dynamic environments like soccer [1]. The reduction in distance to the goal over time, as seen in the plotted experiment results, further supports the effectiveness of our discretization approach. Moreover, the use of four key performance metrics—reward, mean reward, distance to goal, and mean distance to goal—enabled a comprehensive evaluation of the agent's learning progress. For example, the mean reward calculation, which averaged rewards over time steps, provided insights into the agent's long-term learning behavior,

while the distance to goal metric showed how effectively the agent minimized errors with each kick. Despite these promising results, there are some limitations to the current approach. Discretization of continuous features, while useful in controlled scenarios, may become impractical in more complex environments with multiple interacting agents, where the state-action space grows exponentially. In addition, the current method does not account for longer-term strategies or positioning beyond the immediate goal of scoring. In real soccer environments, an agent must not only aim to score but also navigate the field in a way that maximizes future opportunities, which requires a more nuanced reward system that incorporates positional awareness. VII. REFERENCES [1] Watkins, C. J. C. H., & Dayan, P. (1992). Q-learning. *Machine Learning*, 8(3), 279-292. [2] Sutton, R. S., & Barto, A. G. (2018). *Reinforcement Learning: An Introduction*. MIT Press. [3] Riedmiller, M., Gabel, T., Hafner, R., & Lange, S. (2009). Reinforcement learning for robot soccer. *Autonomous Robots*, 27(1), 55-73. [4] Lin, L. (1992). Self-improving reactive agents based on reinforcement learning, planning, and teaching. *Machine Learning*, 8(3-4), 293-321. [5] Mnih, V., Kavukcuoglu, K., Silver, D., et al. (2015). Human-level control through deep reinforcement learning. *Nature*, 518(7540), 529-533. [6] Riedmiller, M. (2005). Neural fitted Q iteration – First experiences with a data efficient neural reinforcement learning method. *European Conference on Machine Learning*. [7] Stone, P., Sutton, R. S., & Kuhlmann, G. (2005). Reinforcement learning for RoboCup-soccer keepaway. *Adaptive Behavior*, 13(3), 165-188. [8] Munos, R., & Moore, A. W. (2002). Variable resolution discretization in optimal control. *Machine Learning*, 49(2-3), 291-323. [9] Riedmiller, M., et al. (2009). Reinforcement learning for robot soccer. Autonomous Robots, 27(1), 55-73. [10] Kitano, H., et al. (1997). RoboCup: A challenge problem for AI. AI Magazine, 18(1), 73-85. [11] Stone, P., & Veloso, M. (1998). Layered learning in multi-agent systems: A winning approach to robotic soccer. In Proceedings of the Fifteenth National/Tenth Conference on Artificial Intelligence/Innovative Applications of Artificial Intelligence (pp. 394-399). [12] Sutton, R. S. (1996). Generalization in reinforcement learning: Successful examples using sparse coarse coding. In Advances in neural information processing systems (pp. 1038-1044).

Artificial Intelligence and Legal Research In Nigeria: Navigating The Challenges

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The legal profession can significantly improve the delivery of legal services by embracing Artificial intelligence (AI) responsibly. AI is reshaping legal research, offering significant benefits while also presenting various challenges. AI-powered tools and platforms are revolutionizing legal research across various domains, including case law analysis, contract review, due diligence, and legal document automation. AI is transforming legal research by enhancing efficiency, accuracy, and accessibility. As the technology continues to evolve, its integration into legal practices has the potential to become even more pronounced, necessitating ongoing attention to ethical, privacy, and bias-related issues. Its integration into the legal field must be approached with caution, addressing challenges such as data privacy, bias, and ethical concerns.

This paper explores the current state of legal services in Nigeria, the role and impact of AI, the benefits and challenges of its integration in the legal profession. It seeks to find out how AI could enhance, rather than undermine, the principles of justice and fairness in legal practice. the article employs analytical approach to examine available guidelines in Nigeria and comparative approach by analysing guidelines from legal associations, and international standards. The paper suggests that addressing the challenges associated with AI in legal research requires a multi-faceted approach that encompasses technical, ethical, and practical considerations including a proactive and collaborative approach. By implementing these strategies, legal professionals can harness the benefits of AI while mitigating risks, ultimately enhancing the effectiveness and fairness of legal research practices.

Keywords: artificial intelligence, legal research, legal practice

Artificial Intelligence and Tertiary Education in Nigeria: Interrogating Government Policies and Feedback on Technological Education

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Abstract

Artificial Intelligence has been with us for some time now. The United States of America and China are leading the way in this field of technology and countries like Japan, South Korea, India and Taiwan are not far behind. But the progress being made by these countries rests on their breakthroughs in various fields of science and engineering which in turn rest on the countries' investment in education. Interestingly, Nigeria has the reputation of running a sound tertiary education system in the past and this includes research institutes and centres. The purpose of this study is to examine the state of the country's tertiary education system in the light of the challenges it is facing and then analyse how the objectives of establishing the country's universities and polytechnics as well as research institutes and centres have not been met. This is in spite of the billions of naira being spent on yearly basis to fund these institutions. No serious country expends the kind of resources being expended by Nigeria over the years and would not be alarmed by the lack of result. Thus, underpinning this study is the theory of underdevelopment and one of the objectives of this study is to interrogate the inability of the country's tertiary institutions, research institutes and centres to fulfill the purpose for which they are established. Conclusions are drawn and recommendations are made at the end of the paper in the context of the problems so identified. This work relies on secondary sources and historical method of research is adopted.

Keywords: tertiary education, research institutes, artificial intelligence, science and technology

Artificial Intelligence for Arabic Language Study: Visions and Expectations

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Abstract:

Arabic is of complex grammar, various dialects and unique script. This would be challenging in mastering Arabic in modern educational settings. Despite all these, it is noticed that AI-driven tools would be effective in facilitating Arabic Language acquisition. The integration of Artificial Intelligence (AI) into Arabic Language study represents a notable advancement in the educational technology. This paper synthesizes the current state of AI in Arabic Language study, discusses various AI-driven approaches, tools and applications in the domain. These applications will take care of listening, reading, speaking and writing skills. Using the qualitative research design, the study investigates those applications of AI-technologies, such as Natural Language Processing (NLP), Machine Learning (ML) and Deep Learning (DL) algorithms, to create customized learning experiences for Arabic learners, in order to overcome language learning obstacles and to improve linguistic skills. Adapting the descriptive method, with ten (10) students at the Department of Arabic, University of Ilorin, a questionnaire was used to collect data from the participants, after the researcher had taught them some feature of AI applications in learning the listening, reading, speaking and writing skills. The results indicate that integration of AI application into Arabic Language will enhance proficiency among the Arabic learners and researchers, also the AI can be used to improve contents customization, interactive learning and accurate student performance assessment. It can also help students in the self-learning and reduce the burden of routine tasks on teachers. It was concluded that, despite all those afore-mentioned efficiencies, some challenges still need to be considered, such as good organization and technical monitoring, because, Arabic is a less commonly taught language, acquiring the fourth position, when compared with English which is in the first position, and through which the AI was developed. It was later suggested that those AI applications are incorporated into Arabic, with working on overcoming those identified challenges to promote the Arabic Language study among the learners and researcher.

Key words: Artificial Intelligence, Arabic, Language Skills, Visions, Expectations.

Artificial Intelligence for Arabic Language Study: Visions and Expectations

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Abstract:

Arabic is of complex grammar, various dialects and unique script, all that would be challenging in mastering Arabic in modern educational settings. Despite all these, it is noticed that AI-driven tools would be effective in facilitating Arabic Language acquisition. The integration of Artificial Intelligence (AI) into Arabic Language study represents a notable advancement in the educational technology. This paper synthesizes the current state of AI in Arabic Language study, discusses various AI-driven approaches, tools and applications in the domain. These applications will take care of listening, reading, speaking and writing skills. Using the qualitative research design, the study investigates those applications of AI-technologies, to create customized learning experiences for Arabic learners, in order to overcome language learning obstacles and to improve linguistic skills. Adapting the descriptive method, with ten (10) students at the Department of Arabic, University of Ilorin, a questionnaire was used to collect data from the participants, after the researcher had taught them some features of AI applications in the language learning. The results indicate that integration of AI application into Arabic Language will enhance proficiency among the learners and researchers, also the AI can be used to improve contents customization, interactive learning and accurate student performance assessment. It can also help students in the self-learning and reduce the burden of routine tasks on teachers. It was concluded that, despite all those afore-mentioned efficiencies, some challenges still need to be considered, such as good organization and technical monitoring, because, Arabic is a less commonly taught language, acquiring the fourth position, when compared with English which is in the first position, and through which the AI was developed. It was later suggested that those AI applications are incorporated into Arabic, with working on overcoming those identified challenges to promote the Arabic Language study among the learners and researcher.

Key words: Artificial Intelligence, Arabic, Language Skills, Visions, Expectations.

Usage of Artificial Intelligence tools on teaching as expressed by University Lecturers in Kwara State, Nigeria: Counselling Implication

Keywords: Artificial Intelligence, AI-powered tools, Usage, Counsellors

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Abstract

Artificial intelligence tools are essential in teaching by academic staff, it was observed that most lecturers at the Universities have not been using AI powered tools to the full in teaching Undergraduates. The purpose of this study is to investigate usage of artificial intelligence on teaching as expressed by lecturers in Kwara State, Nigeria: Counselling Implication. The research question is what are the usage of artificial intelligence tools on teaching as expressed by University Lecturers? The research hypotheses were formulated taking four variables into consideration such as gender, age, cadre and Institution Type. Mixed methods research designs were adopted for the study. The population of this study comprised all lecturers in the ten Universities in Kwara State while, a sample of 389 respondents was used for the study. The sample was selected using simple random and purposeful sampling technique. A self-designed closed-ended and open-ended questionnaire entitled "Usage of Artificial Intelligence Tools on Teaching Questionnaire (UAITTQ)" was used to obtain data. Face and Content validities were used to ascertain the validity of the instrument while test retest method of reliability was used for quantitative to determine the reliability of the instrument and coefficient value of 0.78 was obtained. Percentage was used for demographic data, mean and rank order was used to analysis the research question while the hypotheses formulated were tested using thematic Analysis at 0.05 level of significance. The findings revealed that not all University lecturers are using AI-powered tools. Based on the findings of this study, it was recommended that the Unit that deals with AI (COMSIT) should provide relevant tools that can facilitate the use of AI-powered tools. The University management should collaborate with the Counsellors in providing mentoring programs and train lecturers on the use of AI-powered tools.

Artificial Intelligence in Health and Wellness: Revolutionizing Healthcare, medical Social Work Practice and Personal Wellbeing

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Abstract

This paper examines the broad applications of AI in healthcare, emphasizing its importance while recognizing the concern of the public. It addresses ethical considerations and challenges of implementing AI in the healthcare. Through careful synthesis of existing literature around AI, the use of the Diffusion of Innovation Theory, Social Cognitive Theory and Health Belief Model, the paper found that the introduction of Artificial Intelligence (AI) into health care delivery system as a tool, has ushered in a new frontier that is shaping the practice of medicine, as well as personal wellness. It enhances diagnosis, treatment precision, predictive analytics, and administrative efficiency for both core medical professionals as well as other allied health care professional like medical social workers and psychologists. These creditable progress within the health care delivery notwithstanding, the paper found existing concern about the deployment of AI within the health care sector. These concerns include those relating to data security and privacy, ethics of decision- making and autonomy, bias and fairness in AI algorithms and its likely impact on mental health. The paper recommends that AI be introduced progressively with initial successes in early adopters helping to ease concerns for the public among others. With the recommendations, this paper provides a conceptualization of an Artificial Intelligence-Human Friendly health care delivery that will lead to personal wellness.

Key Words: Artificial Intelligence, Health, personal Wellness,

Artificial Intelligence in Higher Education: Opportunities, Challenges and Ethical Issues

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Abstract

Integrating Artificial Intelligence (AI) in higher education presents significant opportunities and challenges, prompting a critical examination of its ethical and societal implications. This conceptual paper explores AI's potential benefits and complexities in academic settings, drawing from theories of educational technology, ethics, and data governance. The study reveals AI's promise for enhancing educational access, personalized learning, and administrative efficiency, while also identifying risks related to data privacy, algorithmic bias, and diminished human interaction. Concluding that thoughtful AI deployment in higher education requires ethical vigilance, the paper recommends developing transparent policies, inclusive practices, and continuous stakeholder engagement to balance AI's advantages with its ethical challenges. Institutions are encouraged to adopt proactive ethical frameworks and ensure AI's equitable and responsible use to support sustainable, student-centered educational practices.

Keywords: Artificial Intelligence, Higher Education, Ethics in AI

Artificial Intelligence, Credibility and Security of Nigeria's 2027 Presidential Elections: Matters Arising

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Abstract

Typical of every new technology, Artificial Intelligence (AI) comes with a mix of threats and possibilities for different spheres of life. Given its techno-deterministic potentials for elections, this study explores the implications of AI for Nigeria's 2027 elections. This comes against the backdrop of a waning trust in democracy evident in the resurgence of coups, contentious and fractious nature of presidential elections on the continent and particularly the 2023 elections in Nigeria. By mining data from open sources, secondary literature and interviews with critical stakeholders in the security and management of elections, this study uses the findings to make recommendations for leashing the threats of AI to election's credibility and security towards secured and credible 2027 elections in Nigeria.

Keywords: **Artificial Intelligence, Elections, Nigeria, Security and techno-deterministic**

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Sub-theme: Artificial Intelligence, Peace and Security

Artificial Intelligence Adoption for Conflict Early Warning System in the Fragile States in Africa

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Abstract:

Economic instability, weak governance and fragmentation of social fabric have accounted for the problem of maintaining peace and security in fragile states. The adoption of Artificial Intelligence (AI) in conflict early warning systems (CEWS) presents an innovative approach to managing and preventing conflict in Africa's fragile states. This paper explores the potential of AI to enhance CEWS that will predict, track and prevent conflict via data-driven insights. This study explore how AI technologies can be leveraged to enhancing conflict early warning frameworks in the fragile states thereby offering a proactive approach to peacebuilding and conflict prevention.

Machine learning, predictive analytics, and big data form the basis for AI applications in CEWS. These technologies can analyze vast datasets from sources like social media, satellite imagery, and geospatial data to detect conflict indicators and patterns, enabling decision-makers to take preemptive action. The study also draws on theories of conflict prevention and peacebuilding, emphasizing the role of technology in enhancing state capacity.

The study concludes that AI's capacity to improve the accuracy and timeliness of conflict predictions. However, significant challenges remain, such as data quality issues, algorithmic biases, and the need for human oversight. Furthermore, fragile states often lack the technical expertise and infrastructure required to fully implement AI solutions.

Governments and international organizations must therefore invest in AI capacity-building, ensure data governance standards are met, and foster collaboration between technology developers and peacebuilding experts. By integrating AI into national and regional security frameworks, fragile states can better anticipate and prevent conflicts, ultimately contributing to long-term peace and stability in their region.

Keywords: AI, Conflict prevention, Early warning, Peacebuilding

Research Management, Assessment and Metrifications: The Emerging AI and Predatory Fuzzy Controversies

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Abstract

Background*:* Metrification, researchers rating and institution ranking based on research outputs has become an indisputable tool for award of scholarships, merits, appointments and recognition in the modern era. The emergent of the Artificial Intelligence (AI) and modern predatory publishing have triggered an endless controversy that urgently warrant collective scientific intervention and coordination.

Methodology*:* A *systematic reviews and meta-analyses of 60 reputable articles from 20 countries covering all continents (Asia, Africa, Europe, Australia, North America, South America) were obtained in scopus, pubmed and embase database was made. Since most articles cited Beall's list in identifying predatory journals, it was adopted as a template for comparison and evaluation. The influence of AI on predatory publishing was also evaluated.* The primary objective was finding studies that investigated at the distinct experiences and responses related to predatory journals in various country contexts in relation to the AI era. The perspectives of these researchers from the countries were obtained and analyzed.

Results*:* Data obtained revealed severe controversies and disagreement on the acceptable definition of predatory publishing as well as acceptable limit of AI tools in scholarly publishing leading to various ranking and metrifications. The study further revealed scholars conflict and intercontinental counteraccusations against *Beall's description of predatory publishing in many other regions. The emergence of numerous AI publishing tools has further made fuzzy, unethicality, predatory publishing, predatory conferencing, predatory ranking* inter alia *making AI-derived metrifications and research management very cumbersome and unreliable.*

Conclusion**:** The study conclude with a call for a concert effort for centralized quality control and research accessibility to addressing these issues and promote more awareness, ethicality and equitable academic publishing practices in the era of ranking race. Continuous intra-continent collaboration, indigenous knowledge sharing for a paradigm shift should be prioritized particularly for the developing countries and all stakeholders.

Keywords**:** Integrity; Research management; Predatory publishing; Reputation Pressure; Regional development

A Review of Problems and Prospects of Telemedicine and Artificial Intelligence Towards Realisation of Primary Health Care Objectives in Nigeria

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BEING A PAPER SUBMITTED FOR PRESENTATION AT THE 10TH ANNUAL CONFERENCE AND 12TH ANNUAL MEETING OF ASSOCIATION OF WEST AFRICAN UNIVERSITIES (AWAU)

Abstract

Primary health care was adopted as a means of achieving "Health for All" globally at the Alma Ata declaration by World Health Assembly in 1978. It is aimed at taking healthcare services to the door steps of the rural dwellers. Primary health care services make use of accessible and affordable technologies that people at the grassroots can maintain. The need to address the health and health-related problems of these people necessitates application of modern healthcare technology to implementation of primary health care services.

The pattern of illness and health problems ravaging the teeming rural dwellers necessitates the need for the adoption of advanced health technologies known as telemedicine care and artificial intelligence. Telemedicine and artificial intelligence are interdependent technologies that often facilitate quality care service that aid healthcare providers in the provision of services. Artificial intelligence technology is an aid to effective use of telemedicine services, hence their interdependence. However, the application of these modern complementary approaches has both the advantages and disadvantages which this paper appraised.

This review examined problems and prospects of telemedicine and artificial intelligence towards realization of primary health care delivery objectives in Nigeria. This paper critically appraised primary health care and health for all; telemedicine and artificial intelligence in healthcare delivery in Nigeria. The library search also dwells on the theoretical justifications for utilization of telemedicine and artificial intelligence technologies at the grassroots. The review further looks at the interdependence between telemedicine and artificial intelligence application towards provision of quality healthcare services in Nigeria. The paper also delves into the problems associated with use of telemedicine and artificial intelligence technologies; as well as prospects of utilizing them.

The paper concludes that telemedicine and artificial intelligence application to healthcare delivery system is a plausible approach going by the health needs and pattern of ill-health among the people at the grassroots. The paper recommends that healthcare providers should use telemedicine and artificial intelligence technologies as supplementary care for their patients; healthcare providers and their clients should avoid over-flooding of their use.

Keywords: Review, Problems, Prospects, Telemedicine and Artificial Intelligence, Primary Health Care Objectives

Integrating AI in Education: Promoting Responsible Use of AI Technologies in West African Universities without Encouraging Academic Dishonesty

By

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The growing presence of AI tools such as ChatGPT, automated writing assistants, and content generation software is reshaping education in universities. While these technologies offer substantial benefits enhancing personalized learning, research capabilities, and access to information they also introduce challenges related to academic integrity. Universities must find ways to leverage AI in education without promoting its misuse for cheating. This study examines how West African universities can integrate AI technologies into their curricula while encouraging ethical use and preventing academic dishonesty. It explores policy frameworks, educational strategies, and case studies from institutions that have successfully balanced the use of AI with maintaining academic integrity. The research uses a multidisciplinary approach, drawing insights from educational policy, AI technology, and ethics. Comparative case studies from universities in the U.S. and Europe highlight how fostering AI literacy, combined with clear usage guidelines and honor codes, can reduce AI-related cheating by up to 25%. Initial results show that universities with well-defined AI policies, paired with plagiarism detection tools and ethical training, significantly minimize the misuse of AI in academic settings. This study concludes that AI can transform education when properly managed. Recommendations include the development of comprehensive AI ethics courses, transparent policies for AI use in academic assignments, and the implementation of monitoring systems. By promoting responsible use, universities can prepare students for AI-driven future careers while safeguarding academic integrity.

Keywords: AI in Education, Academic Integrity, Responsible AI Use, West African Universities

Managing Artificial Intelligence-Driven Platforms for Student Development

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Abstract

Introducing artificial intelligence into education is driving a fundamental shift in the approaches to teaching and educational practice that are now in use. This study explores how AI-driven platforms, such as personalized learning platforms, smart content, and intelligent tutoring systems, contribute to students' cognitive growth, problem-solving skills, and overall academic performance. A structured survey was used to gather data for the study. The undergraduate students in Kwara State, Nigeria's public universities' faculties of education were the target population. SmartPLS tools were used to analyze the data. The findings suggest that the effective management of artificial intelligence tools, such as personalized learning platforms, smart content, and intelligent tutoring systems significantly influences student development in higher institutions. The study's conclusions show that personalized learning platforms, smart content, intelligent tutoring systems, and student development in higher education have a good and significant association. According to the study, to enhance student development in higher education, school administrators should keep leveraging AI and dynamically crafting personalized learning paths based on individual student capabilities, preferences, and progress, fostering a more effective and engaging educational experience. This study contributes to knowledge by demonstrating how AI-driven learning platform increase students' overall comprehension and academic achievement.

Keywords: Artificial Intelligence in education, Distance education and online learning, Personalized learning platforms; Intelligent Tutoring Systems

Emergence of Artificial Intelligence is it a threat or Opportunity? Analysis of Perceived Student and Teacher Readiness for AI-Driven Education in Kwara State, Nigeria

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Abstract

The incorporation of Artificial Intelligence (AI) in education possesses transformative potential; yet, its efficacy is significantly dependent on the willingness of students and teachers to embrace AI technology. This study investigates the readiness of secondary school students and teachers in Kwara State, Nigeria, for AI-integrated education, emphasising the influence of social, cultural, and economic aspects on their perceptions of AI. Primary areas of emphasis encompass the degree of awareness pertaining to AI technology, accessibility to AI training, and societal obstacles that may impede AI adoption. The project will examine how existing inequalities, including the digital divide between rural and urban schools, influence the effective adoption of AI in education. A mixed-methods approach will be employed, integrating quantitative and qualitative data to offer a thorough knowledge of both measurable and subtle sociocultural dimensions. The study will encompass over 400 participants, comprising 300 students and 100 teachers, chosen by stratified random sampling to guarantee a representative sample. Quantitative data will be obtained using structured questionnaires, and qualitative insights will be acquired via semi-structured interviews with 20 teachers and 20 students. The data analysis will utilise descriptive and inferential statistics for quantitative data, and theme analysis with Atlas-ti software for qualitative data. This methodology seeks to elucidate the social factors affecting AI adoption and provide significant insights for policymakers and teachers. The project aims to enhance the fair integration of AI in Nigeria's educational system by addressing sociocultural variables and technology readiness, hence facilitating a more inclusive and effective deployment of AI tools.

Keywords: Awareness of AI, access to AI technologies, readiness to adopt AI, socio-economic factors, and infrastructural challenges

Leveraging *In silico* Approaches to Combat Hospital-Acquired *Staphylococcus aureus* by accelerated Drug Discovery

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Abstract

The increasing prevalence of hospital-acquired *Staphylococcus aureus*, largely due to widespread antibiotic use, has created a pressing need for alternative therapies. This urgency has led to the exploration of bioactive compounds from endophytic fungi. To expedite the drug discovery process and reduce reliance on chance, an *in silico* approach is essential for efficiently identifying and assessing these bioactive molecules. The three dimensional structure of protein targets Tyrosyl-tRNA synthetase, DNA gyrase, SHV-1 beta-lactamase, Penicillin binding proteins, Topoisomerase, and Dihydrofolate reductase were obtained using Uniport database and Glide's protein wizard prepared bacterial targets while Pubchem database using Ligprep 2.4 software was used to prepare the ligands; gamma Tocopherols, 3-beta-acetoxy-5-bisnorcholenic acid, Alpha-Amyrin and Stigmasta-4,22-dien-3-one. The binding site prediction was done using SiteMap. The molecular docking was done using Schrodinger's Grid-Based Ligand Docking (Glide) software. The bonding interactions by the amino acid residues with the compounds exhibited stability and specificity which informs the level of bioactivity. Among the compounds evaluated, gamma-tocopherol demonstrated the highest binding affinity, with docking scores ranging from -5.434 to -2.54, positioning it as a promising candidate for addressing multidrug-resistant *Staphylococcus aureus*.

Keywords: *Staphylococcus aureus*, *In silico*, Protein targets, gamma-tocopherols and Bioactivity

Bio-direct synthesis of Au-Ni nanohybrid from *Ananas comosus* extract for photocatalytic degradation of polyethylene films under solar irradiation

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Abstract

Polymer materials are widely used in various industries due to their cost-effectiveness and durability, but they contribute significantly to environmental pollution due to improper disposal and lack of recycling. This study explored the biosynthesis of an Au-Ni nanohybrid for the solid-phase photocatalytic degradation of low-density polyethylene (LDPE). The Au-Ni nanohybrid was synthesized using *Ananas comosus* (pineapple) extract. The properties of the synthesized nanohybrid were characterized by UV-visible spectroscopy (UV), Fourier Transform Infrared Spectroscopy (FT-IR), X-ray Diffraction (XRD), Energy dispersive X-ray spectroscopy, and High-Resolution Transmission Electron Microscopy (HRTEM). HRTEM analysis of the Au-Ni nanohybrid revealed well-dispersed core-shell shape NPs with an average particle size of 11.77 ± 4.11 nm. XRD analysis showed four distinct peaks at 31.8°, 38.5°,47.4° and 67.5° corresponding to the (100), (111), (200) and (220) planes respectively, which aligns with the face-centred cubic (fcc) structure of Au-Ni bimetallic nanoparticles. The photocatalytic activity of LDPE-Au-Ni nanocomposite and pure LDPE films was monitored by measuring photo-induced weight loss, with further characterization using FTIR and SEM. After 30 days of exposure to solar radiation, the LDPE-Au-Ni nanocomposite films showed a weight loss of 52.14 %, compared to 8.6 % for the pure LDPE films. This study presents a potential eco-friendly solution to address environmental pollution caused by polymer waste.

Keywords: Nanohybrid, polymer, *Ananas comosus*, degradation, solar irradiation

Awareness and Usage of Artificial Intelligence Tools Among Tertiary Students in Kwara State: A Survey of Educational Applications.

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Abstract

Artificial Intelligence (AI) has the potential to transform the educational landscape by enhancing personalised learning and improving access to information. This study investigates the awareness and usage of AI tools among tertiary students in Kwara State, Nigeria. The primary objective was to evaluate students' knowledge and adoption of AI-based applications in their learning processes. A descriptive survey design was employed alongside inferential statistical methods to analyze data collected using structured questionnaires from 250 students across five institutions. The results indicated a generally low level of awareness and usage of AI tools among the students, emphasizing the need for digital literacy programs. Based on these findings, the study recommends enhanced AI-focused training and integration of AI into the curriculum to foster technology adoption in educational settings.

***Keywords*:** Artificial Intelligence, Awareness, Tertiary Students, Learning

Artificial Intelligence, Indigenous Knowledge and Traditional Security System in Yorubaland: A Historical Analysis

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Abstract

Artificial Intelligence (AI): the use of machines, computers and robots to perform human functions, including security, has gained ascendancy in recent times. In Yoruba society, security is a common concern, which transcends political leadership and the military. Indigenous knowledge is central to the realization of this shared goal. The objective of this study is to explore artificial intelligence, indigenous knowledge system and the changing role of traditional security agents in Yorubaland. The study employs a historical research method: a blend of primary and secondary sources. Yoruba traditional security requires the commitment of soldiers, guards, chiefs, youth leaders, market heads, spiritualists, masquerades, hunters, smiths, artisans, guilds, professional associations, entertainers, itinerant workers, and spies. Potent areas of indigenous knowledge in security are intelligence gathering, policing, information and communication, and ultimately, internal and external defence of territories. Indigenous knowledge has, through creation (weapons and objects), and abstraction (ideas), contributed to the success of the Yoruba security due to the peoples' social and value system. Artificial intelligence, although desirable, has low awareness, high cost, and complexity. Precolonial military personalities like Oluyole, Ibikunle, Ogunmola, Latoosa and Ajayi Ogboriefon, of Ibadan; Lisabi of Egbaland, and Fabunmi Okemesi of Ekiti, were revered for their military heroics in Yoruba state security. However, non-military elements facilitated their success through indigenous knowledge system. Even though the British indirect rule redefined the role of the traditional security agents, they have remained active in the Yoruba security architecture. After Nigeria's independence in 1960, Yoruba native soldiers, hunters and government performed collaborative functions in security as exemplified by recent vigilante and *Amotekun* outfits in few states in southwestern Nigeria. Unlike AI, indigenous knowledge has been an important part of the economic, social and political security system among the Yoruba since the early period.

Artificial Intelligence As A Tool To Mitigate Climate Change In Agriculture: An Empirical Review

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Abstract

The review examined the artificial intelligence as a tool to mitigate climate change in agriculture. The climate change issues serve as a major threat to agricultural production globally, and there is need to adopt sustainable farming approaches to mitigate this trending challenges within the agricultural sector. The review focused on three (3) areas which are weather forecasting precision agriculture, and natural resources and relates them to climate change mitigation in agriculture. Findings were synthesized from different existing empirical studies on climate change and artificial intelligence. The findings reveals that Artificial intelligence have the ability to reduce green gas emission caused by human actions, adoption of novel practices to improve agricultural practices, resource optimization, weather forecast improvement, and promote sustainable practices. Results further shows that precision agriculture adoption in agriculture can lead to reduction in use of chemicals to certain degree, machine leaning algorithm can help in forecasting accuracy, while natural resource management with the application of algorithms can lead to water management and reduced levels of deforestation. The study concluded that the introduction of artificial intelligence in climate change mitigation related to agricultural shows a significant development in sustainability of emerging farming practices. Development of framework policies to improve on artificial intelligence technologies adoptions in agriculture. The creation of artificial intelligence tools related to agricultural activities on climate change application to improve productivity among farmers and other stakeholders.

Keyword: *Artificial intelligence, Climate change, Mitigation, and Agriculture*

Enhancing Quality Management Of Primary Schools Through Effective Integration And Utilization Of Information And Communication Technology (Ict) In Nigeria.

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Abstract

In Nigeria, primary education is regarded as the foundation of the overall educational system. This implies that, the success or otherwise of the subsequent levels of education, such as; secondary and tertiary institutions hugely depend on the quality of primary education received by the individual. Again, quality management of primary schools is crucial to the achievement of the objectives of primary education. In this regards, this paper looks at how management of primary schools could be strengthened through effective integration and utilization of Information and communication Technology (ICT). This is based on the fact that the use of ICT in education and management is increasingly important in today's digital age. The paper examines the significance of management in education and makes an overview of the present management practices in primary schools in Nigeria. It goes further to present the role of ICT in school management and also present an ICT-based framework for quality management of primary schools. In addition, the paper outlines the challenges that could hinder effective integration and utilization of ICT in management of primary schools in Nigeria. These include; massive infrastructural decay in public primary schools, low capacity of primary school personnel and lack of political will to prioritize education among others. In line with these challenges, the paper proffers recommendations to improve the integration and utilization of ICT in the management of primary schools in Nigeria. Among these recommendations are: need for massive overhaul of infrastructure in public primary schools, improve capacity building of primary school personnel and need for maximum political will to prioritize primary education in Nigeria.

Key words: Primary education, Management, Information and communication Technology

Training Needs Identification and Perceived Usefulness of Artificial Intelligence Based Weather Information for Crop Calendar Among Women Farmers in Nigeria

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Abstract

AI for women in Agriculture (AI4WIA) project targeted the capacity development of Nigerian women farmers on using AI-based weather predictions as input for their cropping decision. For guidance and reference, the pre-training study evaluated the women farmers' experience, accessibility and disposition towards AI-based weather information with a view to pinpoint their training needs and reflect their perception of the potentials. Purposively selected 107 women farmers who satisfied the project's criteria of appreciable literacy and access to smartphones, from the 2 project states (Osun and Kwara), were the subjects of this study. Data were collected using a validated questionnaire administered before the project training in the two locations and analysed using descriptive and inferential statistics. The results showed women farmers vivid observation of variations in rainfall, heat intensity, humidity among others and the consequent experience of crop pests' infestation, drought, disease outbreaks, degraded soils and drastic soil

moisture reduction. Most (97%) attested to the high usefulness of precise weather information as a basis for climate-smart crop calendar. This disposition was underpinned by the women trial of AI-based weather information and depth of experience of climate change effects. It was concluded that the women farmers need sensitization on standardized weather information source and capacity to utilize accessed information for AI crop calendar usage. The study recommends enabling access to weather information for women farmers through smartphone apps, leveraging AI and tailored forecasting programs as exemplified with AI4WIA project using NIMET app.

Keywords: Artificial Intelligence in agriculture; climate change effects; climate-smart cropping, crop calendar, weather prediction, women farmers.

Artificial Intelligence and the Future of Education: AI-Enabled Language Translators for Inclusive Education in Nigerian Classrooms

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Abstract

Linguistic diversity is one of the major challenges facing education in Nigeria's multilingual society, creating a learning barrier among students in rural and underserved communities, as a result of the absence of educational resources in indigenous languages, such as Yorùbá, Hausa, and Igbo. Due to this diversity, educational inequality emerges among non-English-speaking students as they struggle to fully engage with the curriculum. By exploring the potential of Large Language Models (LLMs) and other Artificial Intelligence (AI) technologies in translating into indigenous Nigerian languages, this paper proposes the development of an AI-Enabled language translation system for Nigerian classrooms to breakdown language barrier as well as facilitate inclusion in education. Yorùbá as one of the indigenous languages would be the focus of this study. The integration of an AI-Enabled learning materials into classrooms will empower the teachers and the students to access education in their native languages. The methodology used in this study, involves the training of AI model with local language datasets to ascertain proper capturing of linguistic nuances. This study will also assess the impact of AI translation tools on learning outcomes and student engagement in multilingual classrooms, with its preliminary findings suggesting that AI-based translation has potential of significantly improving comprehension, literacy, and participation for indigenous language speakers. The study recommends that the scalability of this technology should be extended beyond Nigeria, to offer solution to other low-resource languages across Africa. Through focusing on the integration of AI in education, this project demonstrates how AI can drive educational inclusivity within and outside Nigeria. It also presents a pathway to address technical challenges of developing language-specific translation tools with priority given to accuracy and cultural relevance. The vision is to create an education system where every child, regardless of their native language, has equal access to learning opportunities.

Keywords: Linguistic diversity, Artificial Intelligence (AI), AI-Enabled translation, Educational inclusivity, Indigenous languages

Artificial Intelligence and Emerging Issues in Library and Information Service Delivery.

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Abstract

Purpose of the paper is to explores the areas of transformation in Library and Information Service delivery brought about by artificial intelligence (AI). Underpinning concepts include: technical, readers, specialized and bibliographic services as well as social media, information literacy and security services respectively. AI has transformed technical services such that the technology handles selection, acquisition and submission of the list of books to be acquired to book seller or vendor via e-mails. With readers' services, this technology can inform users about the circulation status of information resources, i.e. when book loaned is due; browse shelves and direct users to locate information resources being requested while chatbot is used to provide virtual reference services. Artificial Intelligence provides specialised services i.e. mobile library services are offered through smartphone, and current awareness services are delivered by informing users of new arrivals in library. Automatic indexing and abstracting of documents, compilation of bibliographies is carried out through artificial intelligence. Through information literacy, AI is used to teach users how to source, identify, locate, evaluate and use information. Through security services, Radio Frequency Identification (RFID) safeguards theft of library collection, while social media platforms are used to deliver and share information resources and library services among users. Underpinning theory of library and information services states that "books are for use, every reader his/her book, every book its reader, save the time of reader and library is growing organism." Application of AI to library and information service delivery is associated with challenges to includes: technical know-how, conservative nature of library staff, funding, infrastructural and technological issues. Conclusions is that the advent of artificial intelligence in libraries has made service delivery efficient, timely, easy and reduce human labour. Recommendations for stakeholders in the information industries include adequate sensitization, training and re-training of library staff, and efficient funding.

Key words: Artificial intelligence, Challenges, Emerging issues, Library, Service delivery.

Sentiment Analysis of Artificial Intelligence and the Future: A Triadic Framework for Sustainable Governance

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Abstract

This study aims to examine public sentiment towards Artificial Intelligence (AI) and its role in shaping the future of sustainable governance in the 5th industrial revolution. Specifically, it addresses the following research questions: What are the prevailing sentiments expressed about AI? How do these sentiments relate to key themes in AI governance? What are the central issues necessary for sustainable AI governance? Using a web scraping approach, 22,022 comments were extracted from six AI-focused YouTube videos via the Google Application Programming Interface (API). The videos were selected based on relevance and engagement metrics. The data were analyzed using Python programming language, employing sentiment analysis, word frequency analysis, topic modeling, correlation analysis, and network analysis. The findings revealed that the majority of comments (10,000, or 45%) were positive, while 9,000 (41%) were neutral and 4,000 (14%) were negative. Ten key topics were identified, including AI's impact on media, employment, and social transformation, with strong positive correlations found between AI's future impact on media (90%) and social transformation (90%). Central to the discourse were themes of AI support, ethical considerations, and employment. The research recommends that policymakers adopt a proactive approach to AI governance, balancing opportunities with ethical considerations. Specifically, it is advised that stakeholders implement a triadic framework (encompassing AI support, ethical considerations, and employment) when integrating AI technologies to ensure sustainable governance in the future. The study concludes with theoretical recommendations and a discussion of its limitations, serving as a valuable resource for researchers and scholars pursuing future studies in this domain.

Keywords: Artificial Intelligence, Web Scraping, Sentiment Analysis, Ethical Consideration, Sustainable Governance

Understanding the Ethical Considerations of Using Artificial Intelligence (AI) in Islamic Research and Scholarship

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Sub-Theme: Artificial Intelligence and Multi-Disciplinary Research

Abstract

The growing wave of integration of Artificial Intelligence (AI) into Islamic scholarship is raising significant concerns bordering on violation of ethical principles in Islam by the experts in the bid to align Islamic scholarship with modern trends, especially in the present fast-changing world, where AI is playing a leading role. In the field of scholarship, it has facilitated accessibility to knowledge, and it has established its effectiveness and efficiencies in enhancing research and dissemination of its findings, but there are noticeable concerns vis-a-vis originality, authenticity, applicability and responsibility among others that are critical to acceptability and reliability of AI in Islamic scholarship. The purpose of this paper therefore is to discuss the key ethical issues that need consideration as integration of AI in Islamic scholarship advances. With the use of qualitative research methods, the paper highlights various ethical challenges posed by the integration of AI in Islamic scholarship, resulting from the vulnerability of most users. The findings revealed that AI is useful for Islamic scholarship because it is cost and time-effective as well as promotes research. However, it largely jettisons different Islamic ethical principles because it harbours deceptions, fake content, provocations, and unrealistic presentations among others that have the potential to mislead people. It therefore concluded that the integration of AI into Islamic scholarship should be guided by Islamic ethical principles, to maximize its advantages, while minimizing its disadvantages. It therefore recommended compliance with Islamic virtues by ensuring truthfulness, sincerity, safety, dignity, unity and peace among other ethical principles of Islam.

Keywords: AI, Ethics, Research, Scholarship, Virtues

Global Health Initiatives and Artificial Intelligence: Application and Challenges

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Abstract

In the past few years, Artificial intelligence (AI) has enjoyed global acknowledgment and emerged as a powerful and essential tool in advancing global health initiatives, which is an organized effort, by multinational or international organizations, aimed at improving health outcomes on a global scale. This study investigated the applications and challenges of AI to global health initiatives with the aim of proffering solutions to mitigate the challenges. The challenges encountered by global health initiatives without the application of AI include incomplete and fragmented data due to human limitation, delayed reporting resulting in delayed response to disease outbreak, limited access to healthcare resources due to shortage of healthcare personnel and specialised knowledge, inefficient resource allocation and cultural and language barriers. The application of AI in global health is prominent in disease prediction, diagnosis, treatment and public health monitoring while the potential challenges of applying AI to global health initiatives were identified as lack of availability and quality of large data sets to enable optimal functioning of the AI system, ethical and privacy concerns as well as access and equity issues. The study concludes that AI holds the key to improved global health initiatives as it has the potential to reduce health disparities in underserved regions. Dedicated effort is encouraged towards developing inclusive data sets, deliberate investment in local infrastructure of underserved regions, ensuring the security of data, and fostering local expertise through training and retraining will play essential roles in maximizing the benefits of AI in global health initiatives while minimizing potential risks.

Keywords: Artificial Intelligence, Global Health, Applications

Preservice Teachers' Perspectives on Integrating Artificial Intelligence (Ai) Based Tools into Science Teaching

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Sub Theme: Artificial Intelligence and Future of Education

Abstract

Extant literature has emphasized the role of teachers in deploying innovative tools in teaching and learning. Preservice teachers are crucial in shaping the future of science education, particularly in integrating emerging technologies such as AI-based tools. AI offers novel opportunities for teaching and learning, especially in creating personalized learning experiences. This study therefore examines preservice teachers' perspectives on integrating AI-based tools in their future science classrooms. Adopting a qualitative approach, this study explored preservice teachers' perspectives on the role of AI in science teaching; and their opinions on the challenges and ethical considerations of integrating AI into science teaching. The research employed a phenomenological design involving seven preservice science teachers in the final year of their program. Data was collected through a semi-structured interview, and its reliability was determined using inter-rater reliability. The gathered data was thematically analyzed using Atlas.ti. The findings revealed that preservice teachers expressed positive opinions about the role of AI in transforming the future of science education. Their responses were categorized into three themes: Smooth access to information; personalized learning; and ease of tasks that require human intelligence. Additionally, findings on challenges of using AI were categorized into four themes: the evaluation of AI outputs, lack of internet-supported devices; lack of training; and Fading of critical thinking skills. Respondents' perspectives on ethical issues were also categorized into three themes: knowledge update on best practices; plagiarism; and data protection. The study recommended that stakeholders in education should provide adequate training to guide pre-service teachers in integrating AI-based tools to enhance students' learning. It also suggested that policymakers ensure the proper implementation of policy documents that guide ethical development and use of AI-based tools.

Keywords: Artificial intelligence; Science teaching; Preservice teachers

Impact of Using Artificial Intelligence (AI) in the Teaching and Learning of Arabic literature in Nigeria

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Abstract

The integration of Artificial Intelligence (AI) in the teaching and learning of Arabic literature has transformed traditional educational approaches, offering innovative tools and personalized learning experiences. This study explores the impact of AI on Arabic literature education by examining its role in enhancing engagement, improving language comprehension and facilitating access to vast literary resources. AI-powered platforms can provide adaptive learning environments that cater to individual student needs, which are especially relevant in Nigeria's diverse educational landscape, allowing for more effective language acquisition and literary analysis. Additionally, AI assists in automating tasks such as grading and content delivery, enabling educators to focus on critical thinking and interactive learning activities. However, the implementation of AI also poses challenges, including the risk of cultural and contextual misinterpretations and the need for technical literacy among educators. This paper highlights both the opportunities and challenges of using AI in Arabic literature instruction, ultimately advocating for a balanced approach that combines technological innovation with human-centered teaching strategies to preserve the richness of the literary tradition.

Key words: Impact; Artificial Intelligence; Teaching and Learning; Nigeria

Integrating Artificial Intelligence Tools into Teacher Education Programmes as Viewed by Lecturers of Colleges of Education

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Abstract

Teacher education is a programme that is meant to develop students aiming to pursue teaching as a future career. It is a profession that has great influence on how knowledge, skills, and attitudes are impacted from generation to generation. Artificial intelligence is a technological-based potentials that can be used to enhance teaching and learning activities. This study therefore, explores how artificial intelligence tools can be integrated into Nigerian Colleges of Education teacher programmes. The study uses descriptive survey research design. The population includes lecturers from Nigerian Colleges of Education, with a sample of 630 lecturers that will be drawn from 21 colleges across three geo-political zones using proportionate, stratified, and simple random. Two research questions and three hypotheses will be used to address the study. Data will be collected via a researcher-developed questionnaire that will be administered through Google Forms. Its validity and reliability will be ascertained before being used. Percentage and mean rating will be used to answer the research questions 1 and 2 respectively, while independent t-tests will be used to test hypothesis 1 and one-way ANOVA will be used to test hypotheses 2 and 3 at a 0.05 significance level. Findings may likely show that lecturers will have moderate awareness of AI tools. They may also have a positive attitude towards integration of AI tools into Nigerian Colleges of Education teacher programmes. The lecturers will identify the AI tools suitable for the Nigerian Colleges of Education teacher curriculum. The study may likely be concluded that there may be a strong consensus on the AI tools integration into teacher education programme. One of the recommendations may include, there will be the need to improve infrastructure facilities in colleges to support AI integration.

Keywords*:* Artificial Intelligence Tools, Colleges of Education, Integrating, Lecturers' view, Teacher Education Programmes

Artificial Intelligence and Emerging Issues in Library and Information Service Delivery.

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Abstract

Purpose of the paper is to explores the areas of transformation in Library and Information Service delivery brought about by artificial intelligence (AI). Underpinning concepts include: technical, readers, specialized and bibliographic services as well as social media, information literacy and security services respectively. AI has transformed technical services such that the technology handles selection, acquisition and submission of the list of books to be acquired to book seller or vendor via e-mails. With readers' services, this technology can inform users about the circulation status of information resources, i.e. when book loaned is due; browse shelves and direct users to locate information resources being requested while chatbot is used to provide virtual reference services. Artificial Intelligence provides specialised services i.e. mobile library services are offered through smartphone, and current awareness services are delivered by informing users of new arrivals in library. Automatic indexing and abstracting of documents, compilation of bibliographies is carried out through artificial intelligence. Through information literacy, AI is used to teach users how to source, identify, locate, evaluate and use information. Through security services, Radio Frequency Identification (RFID) safeguards theft of library collection, while social media platforms are used to deliver and share information resources and library services among users. Underpinning theory of library and information services states that "books are for use, every reader his/her book, every book its reader, save the time of reader and library is growing organism." Application of AI to library and information service delivery is associated with challenges to includes: technical know-how, conservative nature of library staff, funding, infrastructural and technological issues. Conclusions is that the advent of artificial intelligence in libraries has made service delivery efficient, timely, easy and reduce human labour. Recommendations for stakeholders in the information industries include adequate sensitization, training and re-training of library staff, and efficient funding.

Key words: Artificial intelligence, Challenges, Emerging issues, Library, Service delivery.

Gender-Based Challenges In The Use Of Artificial Intelligence For Academic Research: Exploring Postgraduate Students' Perception

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Abstract

Artificial Intelligence (AI) has become an integral part of every facet of human life, and for faculty members involved in academic research, the story is no different. While AI is critical in revolutionising the production and dissemination of scholarly knowledge, gender-based challenges related to its application remain largely under-explored, particularly within the academic community. Thus, this study seeks to explore the views and perceptions of university lecturers on the gender disparities in using AI for academic research by establishing (i) the gender-specific challenges of using AI in academic research and (ii) the impacts of gender-based challenges on the academic research process and findings, and (iii) strategies for overcoming gender-based challenges and promote equitable AI adoption in academic research. Critical feminist theory was used to analyse how gender-based power structures and inequalities impact the use of technology and the need to challenge and deconstruct gendered assumptions within the context of technology. Using a mixed-method approach, the study collect data from postgraduate students across all disciplines at the College of Distance Education, University of Cape Coast, Ghana, to examine how different AI tools are accessed, utilised, and perceived differently for academic research according to one's gender. The study contributed to the emerging but growing discourse on gender and technology and offered important insights for policymakers, educators, and researchers. The study also paved the way for a more equitable and inclusive future in AI adoption for academic research.

Keywords: Academic research, Artificial intelligence, Gender, Postgraduate students

Artificial Intelligence and the Future of Education in Ilorin, Kwara State Nigeria

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Abstract

Education is the Socratic heartbeat of any society in all over the world.The term education system refers to the network of public educational institutions, including schools, universities, and professional training initiatives that provide rigorous educational services. This network of public educational institutions determine the future of education of any country. The future of the education system is intricately linked to government policies and priorities, which significantly impact the well-being and motivation of dedicated educators who possess innate expertise and passion for serving humanity. Although, the technological advances are changing the profile of education system across the globe, this spells out that every academia must acquire the knowledge of Artificial Intelligence to enhance his learning and teaching skills, and improve education system. This paper aims to examine the use of Artificial Intelligence in determining future of education system in Ilorin, Kwara State, Nigeria. Using historical and descriptive research method, this study will interrogate the pivotal role of Artificial Intelligence in enhancing academic outcomes and shaping the future of education in Ilorin. The Paper concludes that Artificial Intelligence can improve education standards if it is integrated and embraced by all the educational institutions and regulatory bodies in Nigeria inline with the concept of learning for all by the education group of the World Bank.

Key words: Artificial Intelligence, Education, Future, Kwara State, Ilorin

The Role of Artificial Intelligence In Border Security And Combating Transnational Crime In West Africa

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This paper investigates the use of artificial intelligence (AI) to enhance border security and combat transnational crime in West Africa, with an emphasis on AI's capacity to identify crime patterns, improve real-time monitoring, and facilitate intelligence sharing. The work aims to investigate West African countries' critical cross-border concerns, such as trafficking, smuggling, and terrorism, by examining how AI may improve existing security frameworks. Based on Routine Activity Theory (RAT), Intelligence-Led Policing (ILP), and Security Governance Theory (SGT), the paper argues how AI technologies such as predictive analytics, machine learning, and facial recognition might transform the region's border security. The paper concludes that artificial intelligence (AI) has the potential to revolutionise border security by facilitating faster and more accurate threat identification. However, data accessibility, technological infrastructure, and operational capability, as well as ethical considerations like privacy and data protection to ensure public confidence, are critical to the effective deployment of AI. This study recommends that West African policymakers prioritise AI-powered security systems by promoting capacity building and regional cooperation. To enhance collective security operations, practitioners must build frameworks that enable AI-compatible data sharing across borders. Furthermore, ethical principles to protect human rights and encourage public responsibility should be developed to foster sustainable and effective security solutions across the region.

Key words: Artificial intelligence, Border Security, Transnational Crime, Routine Activity Theory, Intelligence-Led Policing

Barriers To Ai-Powered Chatbot Adoption for Enhancing Student Support Services In Nigerian Universities: Insights From Al-Hikmah University

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Abstract

The integration of AI-powered chatbots in student support services has the potential to transform higher education by enhancing accessibility and efficiency. However, the adoption of such technology in Nigerian universities faces significant barriers. This study explores the barriers to AI-powered chatbot adoption for enhancing student support services at Al-Hikmah University using a mixed methods approach. The research combines quantitative surveys and qualitative interviews to provide a comprehensive analysis of the challenges faced by key stakeholders, including students, faculty, and IT administrators. A structured survey was conducted with 374 students and staff to gather data on their perceptions of chatbot readiness, technological infrastructure, and accessibility. Descriptive and inferential statistical analyses were used to identify key factors influencing adoption, such as technological literacy, internet connectivity, and data security concerns. Additionally, qualitative interviews with 23 key informants, including IT administrators and faculty members, provided deeper insights into organizational and policy barriers that hinder chatbot implementation. The findings reveal that while there is general optimism about the potential of AI-powered chatbots, significant barriers include inadequate technological infrastructure, concerns over data privacy, limited digital literacy, and resistance to change among staff. Furthermore, the lack of institutional policies and technical support systems was identified as a critical constraint. The study concludes by recommending strategies to address these barriers, such as improving digital infrastructure, enhancing stakeholder training, and developing comprehensive policy frameworks to support chatbot adoption. These insights provide a roadmap for Nigerian universities seeking to enhance student support through AI technology.

Keywords: Technological Infrastructure, Stakeholder Readiness, Adoption Barriers, Digital Literacy, AI-Powered Chatbots

Artificial Intelligence Tools And Mental Engagement Of University Students In Kwara State

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Abstract

The integration of Artificial Intelligence (AI) tools in education is rapidly transforming traditional learning methods, offering students enhanced learning experiences. This research explores the impact of AI tools on the mental engagement of university students in Kwara State, Nigeria. Specifically, the study aims to assess how AI-driven applications, such as personalized learning platforms, chat bot, and collaborative tools, influence students' cognitive engagement. Using a mixed-methods approach, the study will gather quantitative data through surveys and qualitative insights from interviews with students across several universities in Kwara State. The research will examine the extent to which AI tools foster mental engagement skills, such as reading, writing and critical thinking skills. By analyzing the correlation between AI tool usage and students' mental engagement, the findings of this study will provide valuable insights for lecturers, students and technology developers to improve AI integration in higher education. The ultimate goal is to enhance student engagement and learning outcomes in Nigerian universities through effective use of AI technologies.

KeyWords: Artificial, Engagement, Intelligence, Mental

Artificial Intelligence and the Historian Craft in the 21st Century

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Artificial intelligence is a set of technologies that enables the computer to easily perform functions which would requires much time, energy, stress and resources before such task is performed by human being. Historian craft denotes enquiring the past using data gathering and analysis through oral, archival, print published and unpublished literature. The fact that artificial intelligence has come to stay and that researcher all over the world must align and tap from the benefits inherent of it cannot be overemphasized. Contemporary historians have therefore meticulously explored artificial intelligence in perfecting historical documentation, and also jettisoned some aspect contradicting historical methodology. With the aid of historical method of data collection and interpretation, the study juxtaposes the relevance and limitation of artificial intelligence to the craft of professional historians. The paper employs research tools such as purposive sampling technique and focus group discussion in gathering valuable oral information and textual records to analyse the extent of strenght and weakness of artificial intelligence in historical research. Hence, experience from encounters with artificial intelligent among history undergrade and graduate students both at home and in diasporal, professional historians such as teachers at all educational levels, local historians such as qurators, palace historians, Kings' praise chanters and local praise poets among others, consituted the basis of its impact and limitation on historian craft. The paper concludes that despite the fact that contemporary historians aligned with the global reality of artificial intelligence, they maintained high level of discipline and professionalism is resisting it to tamper with the core of historical methodology.

Key Words: Artificial Intelligence, Technology, Historian, Oral

Enhancing Educational Management in Nigerian Universities Through Artificial Intelligence for Improved Decision-Making, Administrative Efficiency, and Resource Optimization

Sub Theme: Artificial Intelligence and Future of Education

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Abstract

The Nigerian higher education sector has experienced significant growth in recent years, creating a greater need for effective management and administrative practices. However, Nigerian universities encounter several challenges, such as insufficient funding, inefficient use of resources, administrative obstacles, and a lack of data-driven decision-making frameworks. The rapid expansion has further strained resources and amplified the demand for academic and administrative support. To address these issues, it is crucial to reassess management strategies, with AI integration being a promising approach. AI, which involves replicating human intelligence in machines, has revolutionized various sectors and holds substantial promise for educational management. Its applications in education include personalized learning, automating administrative tasks, data analysis for strategic planning, and optimizing resources. By analyzing large datasets and providing actionable insights, AI can enable university management to make better, data-informed decisions. Despite its advantages, Nigerian universities have not fully leveraged AI's potential due to a continued reliance on manual processes, limited technology use, and disjointed data management, leading to delays in decision-making and resource misallocation. This paper focuses on the adoption of AI to streamline processes such as student admissions, curriculum planning, and campus operations, resulting in improved efficiency and optimized resource use under financial constraints by monitoring and predicting needs to ensure effective fund allocation. For example, AI can enhance classroom scheduling and energy management, reducing operational expenses while maintaining quality. Therefore, the study recommends AI integration by creating a supportive environment, investing in infrastructure, developing technical expertise, and fostering collaboration among the government, university leadership, and other stakeholders to transform educational management in Nigeria.

Keywords: Artificial Intelligence, University Management, Administrative Effectiveness, Decision-making, Resource Optimization

The Migrational Experience Through Mediterrance Sea To Europe, The Islamic School Of Thought

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Abstract:

This conference paper seeks to shed light on the experience of a migrant (Deborah Imagbeghian) a Nigerian woman who had embarked on a trip to Europe (Italy) with her husband via the infamous Libya route, meanwhile the ballon boat suffered a mishap and he drowned and died inside the Mediterranean sea. The purpose of this paper is to unfold the Islamic school of thought in seeking illegal means in a trip to final destination. Islam had a strong background attach to migration of people from one place to another since people migrate for different reasons; this is the aim to investigate with this conference paper.

Key words: Migrational, Europe, Islam, Italy, Mediterranean.

Enjeux d'une transformation des pratiques et des dynamiques d'échange informationnel

Intelligence artificielle et communication

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(Intelligence artificielle, communication, Biais Algorithmique, Ethique)

Introduction à l'intelligence artificielle et à la communication

Depuis plusieurs années, la technologie a profondément changé notre façon de communiquer. L'intelligence artificielle (IA) joue un rôle central dans cette transition. En effet, les systèmes d'IA, dotés de capacités d'apprentissage automatique et de traitement du langage naturel, permettent une analyse rapide et précise des données textuelles, rendant la communication plus efficiente. Par exemple, les chatbots (agent conversationnel) et assistants vocaux, utilisés par de nombreuses entreprises, offrent un support instantané aux utilisateurs, tout en collectant des informations sur leurs préférences qui peuvent aider à personnaliser les interactions. Toutefois, cette évolution soulève des questions éthiques et sociétales, telles que la protection de la vie privée et l'impact sur l'emploi des professionnels de la communication. Ainsi, il est primordial de considérer comment l'intégration de l'IA dans les pratiques de communication peut transformer non seulement les dynamiques d'échange, mais également les normes sociales qui leur sont associées.

L'impact de l'IA sur les pratiques d'échange d'informations

Aujourd'hui, l'IA révolutionne les pratiques d'échange d'informations, en redéfinissant non seulement, la manière dont les données sont partagées, mais aussi, la confiance que les utilisateurs accordent à ces systèmes. En facilitant l'analyse massive de données, l'IA permet une personnalisation accrue des échanges, où chaque utilisateur reçoit des informations adaptées à ses besoins spécifiques, augmentant ainsi, l'efficacité des communications (Briggs et al., 2007). Cependant, cette prospection de données soulève des préoccupations relatives à la vie privée et à la sécurité des informations personnelles, une dynamique que les entreprises doivent gérer avec soin pour maintenir la confiance de l'utilisateur. D'autre part, des phénomènes, tels que l'émergence d'écosystèmes de communication intelligents, illustrent comment l'IA peut créer des chaînes de valeur interconnectées et réactives. Cependant, ces innovations nécessitent également une réflexion éthique approfondie, afin de garantir qu'elles ne compromettent pas les fondements mêmes d'une communication saine (Kasza et al., 2019).

Considérations éthiques dans la communication pilotée par l'IA

L'essor de l'IA dans la communication suscite des problématiques éthiques qui font appel à la responsabilité, à l'authenticité et à la transparence des échanges d'information. Les outils d'IA, en automatisant des processus de communication, peuvent conduire à des dérives telles que la désinformation ou la manipulation des contenus. Par exemple, les hackathons, qui favorisent la créativité et l'innovation dans le domaine technologique, démontrent comment l'intégration de l'IA peut transformer les dynamiques d'apprentissage (Demir et al., 2024). Cette transformation doit s'accompagner d'une réflexion éthique, car les utilisateurs d'IA doivent naviguer entre l'innovation et l'intégrité. En outre, comme le souligne (Hartle et al., 2009), une culture académique axée sur le développement et la compréhension des valeurs est essentielle pour éviter que les mécanismes de l'IA ne soient perçus comme des outils de transgression. Ainsi, il est crucial d'établir des cadres éthiques qui favorisent une communication responsable, tout en valorisant les avantages des technologies modernes.

Conclusion

L’impact de l’IA sur la communication est indéniable. En influençant les pratiques et les dynamiques d’échange, cette technologie redéfinit la manière dont nous interagissons et partageons l’information. Aujourd’hui, les outils d’IA, tel que les chatbots et les systèmes de recommandation, ne se contentent plus d’automatiser des tâches ; ils transforment également notre conception de la communication. En simplifiant l’accès à l’information et en personnalisant les échanges, ils élargissent notre capacité à dialoguer efficacement dans un environnement saturé d’informations. Toutefois, cette révolution pose des questions éthiques et pratiques essentielles, notamment concernant la désinformation et la dépendance technologique. Il devient crucial de formaliser des stratégies qui régulent l’intégration de l’IA dans nos pratiques communicationnelles tout en préservant l’authenticité des interactions humaines, garantissant ainsi une coexistence harmonieuse entre innovation technologique et valeurs humaines fondamentales.

Exploring lecturers' And Students' Perceptions Of Artificial Intelligence (Ai) In Nigerian Education, The Case Of Colleges Of Education In Plateau State.

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Abstract

Keywords: Artificial Intelligence, Education, Perceptions, Lecturers and Students.

The study investigated the Lecturers' and Students' Perceptions of Artificial Intelligence (AI) in Colleges of Educations in Plateau State. The purpose of the paper is to investigate lecturers' and students' perceptions of AI, the specific objective is to investigate lecturers' and students' knowledge of AI, examine lecturers' and students' attitudes towards AI integration in education, identify challenges and opportunities for AI adoption into education. Research questions for the study were; what are the perceptions of lecturers and students regarding the use of AI in Nigerian education? what is the contrast between lecturers' and students' AI knowledge, attitudes and skills? and what are the influencing factors behind lecturers' and students' adoption of AI in education? The study adopted a survey research design. 300 students were selected from the two Colleges of Education through stratified random sampling technique using sex, age and class level as strata as well as 20 lecturers. The instrument was validated by three experts in Education and Test and Measurement, while test-retest method was used to determine the reliability of the instrument, and the reliability coefficient was 0.87. descriptive statistical method of data analysis was used and the results revealed that 75% of students use AI powered tools while only 40% lecturers do, 60% of lecturers express concerns about AI replacing traditional methods. Hence, 80% of students have the believe that AI enhances learning experiences. In conclusion, the study provides insights into lecturers' and students' perceptions of AI in Nigerian education. Bridging the gaps in knowledge, attitude and skills which are crucial for harnessing the AI's transformative capacity. The recommendations include: capacity building for lecturer on AI integration technology for maximum intellectual and instructional development, curriculum reform to accommodate AI and other technological developments.

Protective Effects of Caffeine on Olanzapine-induced Obesity in Wistar Rats

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Abstract

Obesity is a complicated metabolic illness linked to oxidative stress and a number of health issues, such as diabetes and cardiovascular diseases. This study investigates the anti-obesity and the effect of caffeine on liver function indices, kidney function indices, blood Lipid profiles, metabolic parameters such as insulin and leptin, antioxidant enzymes in Wistar rats with olanzapine-induced obesity. The Wistar rats were divided into seven groups that received Distilled water, Olanzapine, Olanzapine + orlistat, Olanzapine + caffeine dose 1, Olanzapine + Caffeine dose 2, Caffeine dose 2, and Olanzapine for 14 days and caffeine for 14 days, respectively. The duration of the study was 28 days, during which the rats' body weights, liver function indices, kidney function indices, antioxidant parameters, blood lipid profile, leptin and insulin were monitored. Results indicated that caffeine administration significantly reduced weight gain in olanzapine-induced obese rats, demonstrating its potential anti-obesity effects. Analysis of liver function indices, kidney function indices and the antioxidant parameters revealed that caffeine was able to mitigate some of these parameters like ALT, AST, direct bilirubin, SOD, CAT, K^+, Cl^-, Mg^{2+}, Urea while the rest was elevated even after treatment with caffeine. In conclusion, it can be said that caffeine works better in mitigating the damage done by the obesity in relation to the blood lipid profile.

Keywords: drug-induced obesity, caffeine, olanzapine, leptin and insulin

Optimising Building Energy Consumption Using Deep Whale-Based Recurrent Neural Networks (DWO-RNN)

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Abstract

The increasing global demand for energy, particularly within the building sector, necessitates the development of advanced techniques for optimizing energy consumption. This paper presents a novel approach—Deep Whale Optimization-based Recurrent Neural Network (DWO-RNN)—designed to optimize building energy consumption by leveraging the predictive capabilities of Recurrent Neural Networks (RNNs) combined with the hyperparameter tuning efficiency of the Whale Optimization Algorithm (WOA). RNNs are widely recognized for their effectiveness in time-series forecasting, which is essential for predicting energy consumption patterns. However, the challenge of selecting optimal hyperparameters can limit their performance. To address this, WOA, a nature-inspired optimization algorithm, was integrated into the RNN training process, allowing for enhanced global search capabilities and efficient hyperparameter tuning. The proposed DWO-RNN model was evaluated using a comprehensive dataset that included historical energy consumption data, weather conditions, occupancy levels, and other operational variables collected from a smart building over two years. The model demonstrated superior predictive accuracy, achieving a mean absolute percentage error (MAPE) of 3.2% and a root mean square error (RMSE) of 0.15, outperforming baseline models such as traditional RNNs and LSTM networks, which recorded MAPEs of 5.6% and 4.9%, respectively. Furthermore, the DWO-RNN model enabled a reduction in overall energy consumption by 8%, with peak-hour savings reaching 12%. These findings highlight the potential of the DWO-RNN model as an effective tool for optimizing energy consumption in smart buildings. By improving predictive accuracy and dynamically adjusting energy management strategies, the model contributes to enhanced operational efficiency and energy savings. This research offers a scalable solution for real-world applications, supporting the ongoing efforts toward sustainable energy management in the building sector. The results underscore the model's applicability for deployment in smart grids, demand-response systems, and integrated energy management platforms.

Keywords: Building Energy Optimization, Deep Whale Optimization Algorithm (WOA), Recurrent Neural Network (RNN), Time-Series Forecasting, Smart Buildings

Exploring the Impact of Artificial Intelligence on Communication Effectiveness in Business Education: A Lecturer's Perspective

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Abstract

The rapid evolution of Artificial intelligence (AI) is reshaping business education, presenting both opportunities and challenges for lecturers. Teaching environments increasingly integrate AI-powered tools, transforming the communication dynamics between educators and students. Effective communication is crucial in business education, driving knowledge exchange, collaboration, and the development of essential skills. The study examines the impact of artificial intelligence on communication effectiveness in business education from lecturers' perspectives in tertiary institutions. The study raised three research questions and formulated two hypotheses. This study adopts a mixed-method approach to explore how AI impacts communication effectiveness from the perspective of lecturers in business education at tertiary institutions. The population of the study comprised 400 respondents made up of lecturers. A sample of 196 was drawn from the lecturers using Research Advisor (2006), and participants were purposefully selected. A proforma was employed to gather quantitative secondary data, while an interview guide collected qualitative insights. Descriptive statistics such as frequency and percentage were used to analyze quantitative data. The qualitative data were analyzed thematically with the aid of Atlas ti. The study reveals that AI-driven communication tools have a positive impact on the communication effectiveness of lecturers in business education. The study also shows that most lecturers perceived AI-driven communication tools as valuable assets in their teaching, particularly for improving communication flow and facilitating timely interactions between them and the students. The study concludes that AI-driven tools significantly enhance lecturer-student interaction and improve students' learning outcomes compared to traditional teaching methods in business education. The study recommends, among others, that tertiary institutions should integrate AI-driven communication tools into both online and traditional classroom settings to foster better interaction and engagement, invest in regular training, improve the provision of infrastructure, and receive continuous feedback from both lecturers and students regarding their experiences with AI-driven tools.

Keywords: Artificial intelligence, communication, effectiveness, business education, lecturers, tertiary institutions

Exploring Lecturers' and Students' Perceptions Of Artificial Intelligence (Ai) In Nigerian Education, The Case Of Colleges Of Education In Plateau State.

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Abstract

Keywords: Artificial Intelligence, Education, Perceptions, Lecturers and Students.

The study investigated the Lecturers' and Students' Perceptions of Artificial Intelligence (AI) in Colleges of Educations in Plateau State. The purpose of the paper is to investigate lecturers' and students' perceptions of AI, the specific objective is to investigate lecturers' and students' knowledge of AI, examine lecturers' and students' attitudes towards AI integration in education, identify challenges and opportunities for AI adoption into education. Research questions for the study were; what are the perceptions of lecturers and students regarding the use of AI in Nigerian education? what is the contrast between lecturers' and students' AI knowledge, attitudes and skills? and what are the influencing factors behind lecturers' and students' adoption of AI in education? The study adopted a survey research design. 300 students were selected from the two Colleges of Education through stratified random sampling technique using sex, age and class level as strata as well as 20 lecturers. The instrument was validated by three experts in Education and Test and Measurement, while test-retest method was used to determine the reliability of the instrument, and the reliability coefficient was 0.87. descriptive statistical method of data analysis was used and the results revealed that 75% of students use AI powered tools while only 40% lecturers do, 60% of lecturers express concerns about AI replacing traditional methods. Hence, 80% of students have the believe that AI enhances learning experiences. In conclusion, the study provides insights into lecturers' and students' perceptions of AI in Nigerian education. Bridging the gaps in knowledge, attitude and skills which are crucial for harnessing the AI's transformative capacity. The recommendations include: capacity building for lecturer on AI integration technology for maximum intellectual and instructional development, curriculum reform to accommodate AI and other technological developments.

Assessment Of Biology Students' Ethical Concerns About Artificial Intelligence In Higher Education In Kwara State

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Abstract

This study assessed the level of awareness and ethical concerns surrounding the use of Artificial Intelligence (AI) tools among Biology students in higher education institutions in Kwara State, Nigeria. The objectives investigated: the level of awareness of AI tools among Biology students, and the ethical concerns students have regarding the use of AI in education. A descriptive survey research design was employed, involving 421 Biology Education students purposively selected from Kwara State University and the University of Ilorin. Data was collected using a structured questionnaire, validated by experts, with reliability established at 0.72 using Cronbach's Alpha. The findings revealed that most students know AI tools, particularly ChatGPT, frequently used for academic tasks such as idea generation and complex topic explanations. However, significant ethical concerns were identified, with students expressing apprehensions about AI facilitating academic dishonesty and undermining critical thinking. Based on these results, recommendations were made for institutions to organize workshops on responsible AI usage and establish clear guidelines to ensure academic integrity and fairness in assessments.

Keywords: Assessment, Biology Students, Ethical Concerns, Artificial Intelligence, Higher Education.

Sociological Assessment Of Operating Artificial Inteligence And Re-Thinking Capacity Of Undergraduate Students In Southwestern Nigeria

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Abstract

This study assessed the sociological assessment of AI usage and its influence on the re-thinking capacity of undergraduate students in Southwestern Nigeria. Specifically, the study examined how students utilize AI tools in their academic work and assessed the relationship between AI usage and their re-thinking capacities. The study hypothesizes that there is no significant relationship between the use of AI tools and the re-thinking capacity of these students. A cross-sectional research design was used. A multi-stage sampling technique was employed to select a sample of 500 students across different faculties, departments and academic levels. The instrument for data collection was a questionnaire developed by the researcher. Data collected were analyzed using both descriptive statistics and inferential statistics. The findings revealed that AI tools are widely utilized by students across academic disciplines. The majority of the respondents (70%) indicated regular usage of AI for various academic activities such as assignments, research, writing, and data analysis. However, while the majority of students acknowledged that AI tools assist in processing information faster and more efficiently, there were mixed views on the influence on critical thinking and problem-solving capacity. Some students expressed concerns that over-reliance on AI tools could undermine their independent thinking skills. The PPMC analysis showed a statistically significant positive relationship between the use of AI tools and re-thinking capacity ($r = 0.72$, $p = 0.000$). This implies that students who engaged more frequently with AI demonstrated improved critical thinking and problem-solving abilities. The study concluded that AI usage enhanced students' cognitive abilities but also raised concerns about the possible erosion of independent thinking skills. The study recommended that AI integration into educational curricula should be approached carefully. Students should be encouraged to think critically on their own while using AI tools as supportive resources.

Keywords: Sociological Assessment, AI usage, Re-thinking Capacity, Undergraduate Students

Strategic Tools For Small Business Growth In Industry 5.0: The Place Of Automation And Business Plan Development

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Abstract

Entrepreneurship significantly contributes to Nigeria's economic development by fostering innovation, job creation, and progress. However, many potential entrepreneurs struggle to create comprehensive business plans, essential for securing funding, guiding operations, and ensuring long-term success. To address this, we are developing an automated business plan drafting tool tailored for Nigerian entrepreneurs, providing an intelligent, accessible, and user-friendly solution. Despite the acknowledged importance of business planning, Nigerian entrepreneurs often face challenges such as difficulty in financial forecasting, limited understanding of market dynamics, and restricted access to expert advice. These barriers hinder their ability to present convincing business proposals to stakeholders and investors, reducing their chances of success and growth. The study aims to develop and implement an automated business plan writing tool to enhance the quality and effectiveness of business plans for Nigerian entrepreneurs, thereby promoting entrepreneurship and economic development. A mixed-methods approach will be employed, starting with a comprehensive literature review to understand current business planning challenges and technological solutions in entrepreneurship. Surveys and interviews with Nigerian entrepreneurs will provide insights into their needs and experiences. These findings will inform the development of a prototype tool incorporating AI-powered features for financial forecasting, data analysis, and tailored recommendations. Usability testing with entrepreneurs will refine the tool. The anticipated outcome is the identification of key challenges faced by Nigerian entrepreneurs in business planning and demonstrating how an automated tool can address these issues. The tool is expected to significantly improve the quality and efficacy of business plans by offering accurate financial projections, relevant market data, and structured guidance. This advancement is likely to increase funding acquisition and business growth prospects while contributing to the field of entrepreneurship support technologies through the integration of AI.

Keywords: AI-Powered Solutions, Business Plan, Entrepreneurship, Finance, Nigeria

Struggle and Resort to Charcoal Energy for Livelihood Sustenance in the Cosmopolitan Ilorin Emirate: A Study on Bio-Inspired-Intelligence

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Abstract

The use of charcoal (wooden coal) and fire wood became intensified across the world regions since the Stone Age and Neolithic period. Its usages in the ancient times symbolized one of the features of the world social order. Abundance of the wooden materials interface with respective regional world's culture and traditions. Varied intellects, knowledge, politics and challenges of individual regional people necessitated the applications of the wooden coal/fire wood to their respective indigenous industrial, manufacturing and household productions and consumptions visa-vise subsequent transitions. Since the second half of the Eighteenth Century, western world nations have advanced to the uses of fossil fuel amidst the Industrial Revolution to drastically reduce the needs for charcoal/fire wood. Such advancement led to the spread of fossil fuel to Africa but to relatively reduce the uses of charcoal/fire wood in all facets of her productions. However, since the beginning of the Twenty first Century, the sub regional Africans have immensely relegated back to the great usages of the charcoal/fire wood. This paper appraised the compelling and traditional usages of charcoal to the Africans, using the cosmopolitan Ilorin Emirate as a study. The method used comprised oral interview, participation observant, sampling, comparative and text contents analysis. The work concluded that while the Emirate had relatively sustained the traditional usages of charcoal, varied intellects, knowledge, policies and costly products of fossil fuel have compelled its people to full fledge usages of charcoal for productions.

Key words: Charcoal, tradition/culture, fossil fuel, bio-inspired-intelligence, Ilorin Emirate

Sub-theme: Artificial Intelligence and Indigenous Knowledge

Survival of Traditional Islamic Educational System in Nigeria in the wake of Artificial Intelligence (AI) Application to Islamic Learning

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Abstract

There is a growing concern about the survival of Traditional Islamic Educational System (TIES), otherwise known as *Madrasah* system in Nigeria, with the advent of Artificial Intelligence (AI) which is gradually changing the general system of education in the country, especially after the COVID-19 pandemic event. The government is adopting AI in its various operations, including schooling system. Different learning platforms and software applications are introduced through which people acquire knowledge. Learning via AI has two features, both of which contradict the TIES method of learning Islam in Nigeria. It is either by self-teaching, through software or the absence of physical contact, whereas the traditional method is both physical and direct. The purpose of this paper therefore is to examine the relevance of Abu Hatim's theory which emphasises the acquisition of Islamic knowledge directly from a teacher, in the age of AI, while relating it to TIES and its survivals in contemporary times. The paper is qualitative research, and it adopted historical and analytical methods. The findings revealed that Abu Hatim's theory is still relevant, especially for the preservation of the sanctity of traditional methods, thus TIES is not endangered by AI, but both can be incorporated to facilitate teaching and learning the processes. It therefore concluded that AI largely depends on TIES because it is originally meant to complement it (TIES). It recommended that various educational policymakers should ensure the relevance of TIES in the age of AI because its survival has a direct bearing on the survival of Islamic heritage.

Keywords: AI, TIES, Madrasah, Teaching, Learning

The Role of AI in Enhancing Communication in the Context of Biology Education.

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Abstract

This article addresses the influential role of Artificial Intelligence (AI) in reshaping communication methodologies in the context of biology education. The remarkable abilities of AI in making choices and solving problems are being increasingly harnessed by educational institutions, including those in Nigeria, to elevate teaching methods and streamline biology lessons. Innovations like chatbots and analytical tools have now become integral to biology classrooms, tackling significant communication hurdles, fostering engagement, and aiding learners in mastering intricate ideas. These advancements encourage interactive and tailored educational experiences, helping to close learning gaps and equipping students with vital competencies for careers in biology-related domains.

The paper highlights AI's contribution to crafting efficient learning ecosystems, bolstering research initiatives, and enhancing curriculum communication. Ethical considerations are pivotal in these developments, with regulatory entities such as Nigeria's National Council for Artificial Intelligence and Robotics (NCAIR) steering the responsible application of AI in education. This article concludes that strategic integration of AI into biology education can profoundly enhance communication, elevate student comprehension, and cultivate a workforce proficient in technology.

Key words: Artificial Intelligence, Communication, Biology Education, Pedagogy

Valorization Of Feather Waste by Indigenous Keratinolytic Bacteria For Response Surface Optimization Of Keratinase Production

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Abstract

The development of more viable and cleaner feather waste management solutions is a necessity to increase environmental sustainability. In this study, the degradability potential of locally isolated keratinolytic bacteria were assessed and conditions for an improved keratinase production was optimized using the response surface methodology. Six locally isolated bacterial species were selected for primary screening on skim milk agar plate while 3 positive isolates were further examined for secondary screening for keratinase production on feather media using submerge fermentation. The isolates were identified using morphological and biochemical methods. The growth profile, feather degradation rate and protein content of the keratinase was studied. Optimization of pH, temperature and incubation period was achieved using Central Composite Rotatable Design of Response Surface Methodology. Higher clear zone (20 mm and 28 mm) and keratinase activity (47.7 U/ml and 49.1 U/ml) was exhibited by isolate E and F, respectively. Isolate F degraded 43.3% of feather at 1.5% feather concentration after 72 hr incubation producing a protein concentration of 8.75 mg/ml. Optimum keratinase activity of 85.8 U/ml was achieved at pH 7.5, 40 ºC at 84 hr resulting in 1.74 –fold increase in keratinase production. The ANOVA results confirmed model being highly significant (F-Value = 69.89, P-Value = <0.0001). The study demonstrate that valorization of feather waste by isolate F, complemented with statistical modelling can predict the optimal conditions for promotion for higher keratinase yield and offer insightful information for scaling up the procedure for industrial applications, while addressing the challenge of feather waste management.

Keywords: Keratinase, Chicken Feather waste, Central Composite Design, Degradation

Barriers To Ai-Powered Chatbot Adoption for Enhancing Student Support Services In Nigerian Universities: Insights From Al-Hikmah University

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SUB-THEME: ARTIFICIAL AND FUTURE OF EDUCATION

Abstract

The integration of AI-powered chatbots in student support services has the potential to transform higher education by enhancing accessibility and efficiency. However, the adoption of such technology in Nigerian universities faces significant barriers. This study explores the barriers to AI-powered chatbot adoption for enhancing student support services at Al-Hikmah University using a mixed methods approach. The research combines quantitative surveys and qualitative interviews to provide a comprehensive analysis of the challenges faced by key stakeholders, including students, faculty, and IT administrators. A structured survey was conducted with 374 students and staff to gather data on their perceptions of chatbot readiness, technological infrastructure, and accessibility. Descriptive and inferential statistical analyses were used to identify key factors influencing adoption, such as technological literacy, internet connectivity, and data security concerns. Additionally, qualitative interviews with 23 key informants, including IT administrators and faculty members, provided deeper insights into organizational and policy barriers that hinder chatbot implementation. The findings reveal that while there is general optimism about the potential of AI-powered chatbots, significant barriers include inadequate technological infrastructure, concerns over data privacy, limited digital literacy, and resistance to change among staff. Furthermore, the lack of institutional policies and technical support systems was identified as a critical constraint. The study concludes by recommending strategies to address these barriers, such as improving digital infrastructure, enhancing stakeholder training, and developing comprehensive policy frameworks to support chatbot adoption. These insights provide a roadmap for Nigerian universities seeking to enhance student support through AI technology.

Keywords: Technological Infrastructure, Stakeholder Readiness, Adoption Barriers, Digital Literacy, AI-Powered Chatbots

Bioaccumulation and Cytogenotoxicity of Toxic Organic And Inorganic Chemicals In Soil, Edible Plant And Well Water From A Major Electronic Waste Dumpsites In Nigeria

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Abstract

Indiscriminate disposal of electronic wastes (e-wastes) in Nigeria is on the increase. This study investigated the level of contaminants in soil, *Amaranthus hybridus* and well water in the vicinity of the dumpsite; potential *in vivo* and *in vitro* cytogenotoxicity and mechanism of DNA damage induced by e-wastes in Alaba International electronic market, Lagos, Nigeria. Sixteen USEPA priority Polyaromatic Hydrocarbons (PAHs), 28 WHO toxic Polychlorinated Biphenyls (PCBs), 8 carcinogenic Polybrominated Diphenyl Ethers (PBDEs), Lead, cadmium and copper concentrations were analysed in the dumpsites' soil, *A. hybridus*, and well water. Cytogenotoxicity study of the samples was carried out using the murine micronucleus and sperm morphology assays *in vivo*. Biochemical parameters [Catalase, reduced Glutathione (GSH), and Alanine Aminotransferase (ALT)] in the exposed mice was assessed according to standard methods. *In vitro*, the NIH/3T3 mouse fibroblast cell line exposed to the leachate was used to assess cytotoxicity using 3-(4,5-Dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide assay and the cell cycle using flow cytometry technique. Soil, plant and well water samples were highly contaminated with toxic PAHs, PCBs, PBDEs, and heavy metals with values above NESREA and WHO limits. There was a positive correlation between the concentrations of organics and heavy metals in the plant samples and the surrounding soil. There was a concentration-dependent, significant induction of micronucleated polychromatic erythrocytes and significant increase in sperm abnormalities in mice. There was a significant increase in GSH and activities of Catalase and ALT compared to the negative control. *In vitro,* there was increased cell death (IC_{50}=30 %) and induction of apoptosis evident in accumulation of sub/G1 (8.3-72.2 %) stage of the NIH/3T3 cell cycle. These findings suggest that e-waste constituents can accumulate in soil and surrounding vegetation to toxic and genotoxic levels that could induce adverse health effects in exposed individuals.

Keywords: *Amaranthus hybridus*, electronic wastes in Nigeria, DNA and oxidative damage, Organic and inorganic contaminants.

Prevalence, Causes and Health Implications Of Depression Among Undergraduates In The University Of Ilorin

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Abstract

This study investigated the prevalence, causes and health implications of depression among undergraduates in the University of Ilorin. The purpose of the study was to determine if:(i)depression is prevalent among the students of University of Ilorin and if: (i)Academic workload; (ii) Financial problem and; (iii) stress are causes of depression and if: Suicide is an implication of depression among Undergraduates. A descriptive research of the survey type was adopted for the study. The sample frame for the study comprised of 6,510 respondents using simple random sampling of fish bowl balloting technique. The instrument used for data collection was a researcher developed questionnaire validated by three experts from the department of Health Promotion and Environmental Health Education. The reliability of the instrument was ascertained through split half method and a coefficient of 0.78 was obtained using Cronbach Alpha for analysis. The demographic data collected was analyzed using frequency counts and percentage while inferential statistics of Chi-square was used to analyze the hypotheses at 0.05 alpha level. The findings of the study, amongst others, revealed that depression is real and significantly prevalent among the undergraduates while academic work load constitute a significant cause of this depression. Based on the findings of the study it was concluded that the reality of depression among undergraduates cannot be underestimated particularly with the attendant effect of suicide thoughts becoming rampant. Issues of academic workload and financial stress were also found to be major or significant contributors to depression among the undergraduates. Hence, It is recommended that the University, as part of other strategic engagements, should establish or create functioning counseling center as well as protocols for early detection, interaction and education of the students with a view to providing timely remedies and curtail the menace.

Keywords: Depression, Prevalence, Health, Undergraduates

Artificial Intelligence and the Future of Educating Children in Nigerian Schools: AI and the Nigerian Learner. A Match Made in the Future

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Abstract

This study explore the potential impact of Artificial Intelligence (AI) on the future of education in Nigerian schools. By examining the benefits, challenges, and implications of AI integration, this research seeks to inform educational policy and practice. A qualitative research approach, combining a literature review and expert interviews (Key Informant), was employed to gather insights into the current state of AI in education, global trends, and potential applications in the Nigerian context. Key findings of this study suggested the potential of AI to personalize learning experiences, improve student engagement, and enhance teacher effectiveness. AI-powered tools will automate administrative tasks, allowing teachers to dedicate more time to instruction. Furthermore, AI will facilitate access to quality education, particularly in remote and underserved areas. However, it was revealed that it is crucial to address ethical considerations such as data privacy and algorithmic bias to ensure responsible AI implementation. Drawing on theories of technology adoption, learning theories, and social change, this study revealed the factors influencing the integration of AI in Nigerian schools and its impact on student learning outcomes. This study concluded that, AI offers significant opportunities to transform education in Nigeria. To realize this potential, careful planning, adequate infrastructure, teacher training, and supportive policies are essential. Investment in digital literacy and critical thinking skills is necessary to prepare students for an AI-driven future. Additionally, establishing ethical guidelines and regulations is crucial to ensure the responsible and equitable use of AI in education.

Keywords: Artificial Intelligence, Education, Nigeria Child, Future of Education

Artificial Intelligence and Stage Design Innovation: A Technological Transition Analysis of Selected Nigerian Production Companies

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Abstract

The seamless integration of artificial intelligence (AI) in human and non-human sectors has revolutionised numerous industries and Nigerian theatre inclusive, boosting efficiency, creativity, and productivity. AI among other innovative technologies has created much-needed technical innovations, skills, new possibilities and a wide audience base for stage productions globally and in Nigeria's theatre space. This paper was, therefore, designed to examine AI application on stage design innovation in selected Nigerian production companies, with a view to determining its impacts on the artistic, dramatic and technical qualities of the production. Fred Davis's technological acceptance model (TAM) and diffusion of innovation (DOI) theory by Everett Rogers were adopted as the framework. The descriptive method, participant observation and interview were employed as the primary source of data. These methods allow us to be actively involved and participate in the production process. This paper reveals that AI has played an expansive role not only in terms of achieving quality stage productions but also in the areas of attracting international recognition and a wider audience base as well as enhancing creativity, efficiency and productivity. The paper concludes that advanced technologies including AI have transformed the art and science of stage performances beyond the achievement of high-quality productions but indeed creating expansive possibilities and new potentials. It is, therefore, recommended that new technologies which include AI, virtual and augmented realities, among other innovative solutions, designs, tools and applications should always be creatively deployed and artistically utilised in Nigerian stage productions.

Keywords: Artificial intelligence, Stage design innovation, Technological acceptance model, Diffusion of innovation, Nigerian production companies

Consumption Of Lead A License To Short Life Span: An Escalating Scenerio In Sub Saharan Africa, Nigeria.

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Abstract

The rate at which Water is been contaminated by lead in sub Saharan Africa is at an alarming rate, and is a source of concern for the Environmental managers especially in Nigeria. A research carried out In Malete Moro Local Government Kwara State Nigeria indicated high prevalent of lead in water where 75% of the populace are youth and students and they required large volume of water. The study employed a combination of field sampling and laboratory analysis to assess lead levels and other physiochemical parameters in water samples from various sources, such as tap water, well water, and river water in Malete. Water samples were collected over two weeks, and parameters such as turbidity, Total Dissolved Solids (TDS), Chemical Oxygen Demand (COD), Biochemical Oxygen Demand (BOD), pH, and lead (Pb) concentrations were measured using standard procedures. The results were then compared with World Health Organization (WHO) standards for drinking water. The major findings revealed that the Zinc and lead concentrations in Malete's water sources significantly exceeded WHO's permissible limits of 0.01 mg/L, with the highest lead levels detected in the Malete river (0.085 mg/L). Other physiochemical parameters, including TDS, COD, and BOD, indicated varying degrees of water quality issues, with particularly high organic pollution levels in the river water. These findings suggest that the water contamination originated from a combination of aging infrastructure, such as decayed lead pipes, and dumping of refuse. There is urgent need to take measures to curb this from escalating youth occupy large space in to future generation, save guarding there health is key to national development. Replacing corroded lead pipes and alternative source of water will help reduce over dependent on one source of water.

Key Words: Lead, Water contamination, Kwara State Malete. Health of the Students

Global Markets, Local Creativities: Artificial Intelligence and the Folk-Pop Music Business in a Digital Age

Conference Sub-theme: Artificial Intelligence and Indigenous Knowledge

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Abstract

Since the advent of global digital technologies, the complexities in production to consumption chain of musical products have reduced significantly. There have been paradigm shifts in the economics of music and cultural products, from production to distribution and consumption. How do folk-derived popular music(ians) respond to the influence of global digital technologies such as AI on local music cultures and its business? Through qualitative design, my study interrogates the dynamics of these global digital technologies in the music of Beautiful Nubia and Lagbaja, and how these realities have transformed how cultural products are made, commodified, circulated and consumed. Roland Robertson theory of glocalisation form the theoretical backdrop for this study. My study posits that, the realities of the fourth industrial revolution (4IR); a digital world vis-a-vis offline reality marked by use of internet technology, artificial intelligence, and renewable energy, has created a new economic dimension to the production, commodification, and consumption of music. Thus, within the realities of the global digital age and the attendant challenges and opportunities that come with it, it is expedient for musicians and other stakeholders in the musical arts to think global but act local in the commodification music as a cultural product.

Keywords: Music Business, Artificial Intelligence, Globalisation, Glocalisation, Yoruba

Cross-Cultural Communication: Examining AI's Role in Facilitating Cross-Cultural Communication between Arabic and other Languages in West Africa

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Abstract

This study explores the role of artificial intelligence (AI) in facilitating cross-cultural communication between Arabic and other languages in West Africa. As a region characterized by linguistic diversity and rich cultural heritage, West Africa presents unique challenges and opportunities for effective communication. This research examines various AI applications, including machine translation, natural language processing, and sentiment analysis, that enable seamless interactions between Arabic speakers and speakers of local languages such as English, French, Hausa, and Wolof.

By analyzing case studies and technological implementations, the study highlights how AI can bridge linguistic gaps, enhance mutual understanding, and promote cultural exchange. Furthermore, it addresses potential limitations, such as the nuances of dialects and cultural context that AI may struggle to capture. Ultimately, this paper advocates for the strategic integration of AI technologies in educational, commercial, and social contexts to foster cross-cultural dialogue and collaboration, contributing to a more inclusive and interconnected West African society.

Integrating GIS and Machine Learning for Flood Prediction and Monitoring in North-Central Nigeria

Sub-theme: Artificial Intelligence and Climate Change

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Abstract:

North-Central Nigeria is prone to devastating floods, affecting thousands of lives and livelihoods. Accurate prediction and monitoring are crucial for effective flood risk management. Floods are a recurring natural disaster in Nigeria, particularly in the North-Central region. The region's unique geography, characterized by the Niger-Benue River basins, makes it prone to flooding. Accurate prediction and monitoring are crucial for effective flood risk management. This study presents a novel approach combining Geographic Information Systems (GIS) and machine learning algorithms for improved flood prediction and monitoring in the region. GIS-based spatial analysis of topography, land cover, soil moisture, and hydrological data from NASA's TRMM, Sentinel-2, and Nigerian Hydrological Services. Derived flood-relevant features from satellite imagery and sensor data. Trained Random Forest, Support Vector Machine, and Convolutional Neural Network models on historical flood data. Assessed performance using precision, recall, and F1-score metrics. The study achieved high prediction accuracy (88.2%) and recall rate (85.5%), Identified critical flood-prone areas along the Niger-Benue River basins and developed a web-based GIS dashboard for real-time flood monitoring and alert systems. This study demonstrates the effectiveness of integrating GIS and machine learning for enhanced flood prediction and monitoring in North-Central Nigeria and the approach enables improved accuracy and reliability, early warning systems for flood risk reduction and informed decision-making for emergency response and urban planning. However, the study recommended Implementation of flood mitigation measures in identified prone areas. Establish a regional flood monitoring and warning system conduct regular updates and model refinement.

Keywords: Flood Prediction, GIS, Machine Learning, North-Central Nigeria, Hydrology.

Perceived Ease-Of-Use and Usefulness as Correlates Of Artificial Intelligence Use For Indigenous Knowledge Management In A Nigerian Public Library

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Abstract

This study investigates perceived ease-of-use and usefulness as correlates of Artificial Intelligence (AI) use for indigenous knowledge management (IKM) in a Nigerian public library. It raises five research questions while three null hypotheses were tested at 0.05 significant level. This study adopts correlational design. Sixty-four (64) personnel of Kwara State Library Board, Ilorin constitute the population of this study. Since the population is minimal and can be covered by the researchers, total enumeration sampling was adopted. A self-developed questionnaire was used to obtain data from the respondents. From the 64 copies of the questionnaire administered, only 33 (51.48%) were fully filled and adequate for analysis. Findings revealed that the respondents generally perceived AI as easy to use for IKM ($\bar{X}$G = 2.76); useful for IKM ($\bar{X}$G = 3.09), while its tools, such as ChatGPT and AI text classifier, can be used to manage IK ($\bar{X}$G = 2.52). Findings further revealed that the respondents felt that AI was beneficial to IKM ($\bar{X}$G = 3.20) and agreed that there were challenges confronting its usefulness for IKM ($\bar{X}$G = 3.20). The results from the tested hypotheses revealed that there is a significant relationship between perceived ease-of-use and AI use for IKM (r =0.228 and 0.210**, p > 0.05); there is a significant relationship between perceived usefulness and AI use for IKM (r = -0.252 and 0.164**, p > 0.05) and a significant relationship between perceived ease-of-use and usefulness and AI use for IKM (r = -0.069 and 0.708 and 0.164**, p > 0.05). This study concludes that there are correlations between perceived ease-of-use and usefulness of AI for IKM by librarians at the Kwara State Library Board. One of the recommendations of this study is that Kwara State Government should provide the necessary ICT infrastructure for the Kwara State Library Board.

Keywords: Artificial Intelligence, Indigenous knowledge management, Perceived ease-of-use, Public library, Nigeria, Usefulness

Harnessing AI for Enhancing Quality in University Education in Nigeria: Issues in Teaching and Learning Translation and Interpretation

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Abstract

The integration of Artificial Intelligence (AI) into Higher Education presents a transformative opportunity to enhance the quality of teaching and learning, especially in specialized fields such as translation and interpretation. In Nigeria, where linguistic diversity, infrastructural limitations, and inadequate educational resources pose significant challenges, AI has the potential to address key issues by providing innovative tools for language learning, real-time interpretation, and translation accuracy. This paper explores the role of AI in improving translation and interpretation studies in Nigerian universities. It discusses how AI technologies—such as machine translation, speech recognition, and adaptive learning platforms—can facilitate more effective teaching, offer personalized learning experiences, and enhance students' linguistic and cultural competence. However, challenges including infrastructural deficits, cost, digital literacy, and the potential for bias in AI systems must be addressed to ensure the successful integration of AI in this context. Ethical considerations and the need for culturally sensitive AI models are also examined. Ultimately, the paper argues that AI, when implemented thoughtfully, can significantly contribute to the advancement of translation and interpretation education in Nigeria, enabling students to thrive in both local and global linguistic environments. It recommends emphasis on human centered-approach and ethical implications

Keywords: artificial intelligence, translation, interpretation, linguistic diversity, cultural competence

Exploring Cultural Accuracy and Equivalence In Translation Through Ai Powered Tools: Efficiency Of Yoruba And Hausa

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Abstract

Diverse ethnic groups and societies have cultures that constitute structure to the form, manner and theme of their languages. Language and culture are intertwined, conjoined. Hence language and culture are like Siamese twin that is unfeasible to put apart. The nature, form of a language can best be analyzed, explain and translate through the prevailing background of its cultural heritage. This study therefore explores the effectiveness of artificial intelligence (AI) tools in ensuring cultural accuracy and equivalence in translations using Yoruba and Hausa, two major languages in Nigeria. With the rise of AI in translation, understanding how these tools handle cultural nuances is crucial for achieving reliable and contextually appropriate translations. This paper explores several AI-powered translation tools to assess the level of accuracy and performance while maintaining cultural integrity and equivalence, highlighting strengths and limitations. The findings offer insights into how AI can be optimized for culturally sensitive translations like the proverbs, idioms and eulogies while providing framework for improving translation practices and informing future developments in AI technology.

Keywords: AI, Accuracy, Culture, Equivalence, Translation.

Artificial Intelligence in Radiation Medicine: Enhancing Diagnosis, Workflow, And Patient Care for Effective Health Outcomes

SUB-THEME: ARTIFICIAL INTELLIGENCE, HEALTH AND WELLBEING

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Abstract

Introduction: With major developments in medical imaging, artificial intelligence (AI) is transforming healthcare and changing the work of radiographers. AI is a disruptive force in radiology departments around the world because of its capacity to increase diagnostic accuracy, optimize efficiency, and enhance patient care.

Objective: To investigate how AI affects radiographers' job, with an emphasis on how it affects patient care, workflow efficiency, and diagnosis, ultimately leading to better health outcomes.

Methodology: A narrative review was employed to gather secondary data from academic databases, including Google Scholar, ScienceDirect, Springer, and PubMed. Keywords such as "AI and Radiographers' practice," "AI and Medical Imaging," and "Impact of AI on Radiography" were accessed for information. PRISMA guidelines were applied to identify and synthesize relevant literature. Out of 37 downloaded articles, 11 were directly related to the study's objectives.

Results: The review highlights that AI is already significantly enhancing radiology departments by improving diagnostic accuracy, reducing manual workloads, and supporting more efficient workflows. Radiographers generally hold a positive attitude toward AI, acknowledging its potential to improve clinical outcomes. However, the integration of AI also brings challenges, such as the need for specialized training and updated educational curricula, to equip radiographers with the necessary skills to work alongside AI technologies.

Conclusion: AI is driving significant advancements in medical imaging, offering radiographers opportunities to expand their expertise and take on broader responsibilities within the field. However, for

successful integration, training programs, transparent policies, and a focus on compassionate, patient-centered care are essential. Radiographers' roles will evolve as AI continues to shape the future of healthcare, requiring a balance between technological proficiency and maintaining the human element of care

Keywords: Artificial Intelligence (AI), Impact, Radiography Practice, Medical Imaging

Artificial Intelligence and the Application of Qisas in Nigeria: Opportunities and Challenges

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Abstract

The advent of Artificial Intelligence (AI) in the contemporary period has transformed virtually all sectors within the globe with Shariah Legal Systems not excluded. In Nigeria, The application of Islamic Criminal Law in the northern region commenced with the initiative of Zamfara state and eleven other states following suit. The intersection of AI and retributive justice in Islamic law (Qisas) presents both opportunities and challenges in the country. This paper explores the potential of AI in enhancing the implementation of Qisas principles within northern Nigeria's legal framework by incorporating perspectives from various stakeholders. Utilizing a blend of historical and descriptive research methods, the paper gathered data through interviews, observations, and literature analysis. Opportunities abounding the use of AI include the automation of legal processes, increased accessibility to justice, speedy delivery of judgment and accurate evidence analysis. AI machines, such as natural language processing and machine learning, could assist in determining offences and its severity thereby ensuring fair adjudication. However, the challenges of ethical concerns, cultural resistance, and the complexities of integrating AI within the existing legal infrastructure, which is influenced by both secular and religious legal principles may be a hindrance to its effective utilization. This paper examines these available opportunities and challenges and offers insights into how Shariah in Nigeria can navigate the potential of AI while respecting the foundational tenets of Qisas in its legal system. Findings of this work reveal that

Keywords: Artificial Intelligence, Shariah, Qisas, Zamfara, Nigeria

Exploring the Impact of Artificial Intelligence on Communication Effectiveness in Business Education: A Lecturer's Perspective

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Abstract

The rapid evolution of Artificial intelligence (AI) is reshaping business education, presenting both opportunities and challenges for lecturers. Teaching environments increasingly integrate AI-powered tools, transforming the communication dynamics between educators and students. Effective communication is crucial in business education, driving knowledge exchange, collaboration, and the development of essential skills. The study examines the impact of artificial intelligence on communication effectiveness in business education from lecturers' perspectives in tertiary institutions. The study raised three research questions and formulated two hypotheses. This study adopts a mixed-method approach to explore how AI impacts communication effectiveness from the perspective of lecturers in business education at tertiary institutions. The population of the study comprised 400 respondents made up of lecturers. A sample of 196 was drawn from the lecturers using Research Advisor (2006), and participants were purposefully selected. A proforma was employed to gather quantitative secondary data, while an interview guide collected qualitative insights. Descriptive statistics such as frequency and percentage were used to analyze quantitative data. The qualitative data were analyzed thematically with the aid of Atlas ti. The study reveals that AI-driven communication tools have a positive impact on the communication effectiveness of lecturers in business education. The study also shows that most lecturers perceived AI-driven communication tools as valuable assets in their teaching, particularly for improving communication flow and facilitating timely interactions between them and the students. The study concludes that AI-driven tools significantly enhance lecturer-student interaction and improve students' learning outcomes compared to traditional teaching methods in business education. The study recommends, among others, that tertiary institutions should integrate AI-driven communication tools into both online and traditional classroom settings to foster better interaction and engagement, invest in regular training, improve the provision of infrastructure, and receive continuous feedback from both lecturers and students regarding their experiences with AI-driven tools.

Keywords: Artificial intelligence, communication, effectiveness, business education, lecturers, tertiary institutions

Artificial Intelligence in Research and Sustainable Development: Shaping the Future through Innovation and Ethical Governance with Insights from UNESCO's 2024 Guidance Document

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Abstract

Introduction: Artificial Intelligence (AI) is playing a critical role in addressing global challenges by supporting sustainable development. According to UNESCO's guidance on generative AI, this technology is becoming increasingly integral to research, development, and policy formulation aimed at achieving the United Nations' Sustainable Development Goals (SDGs).

Objective: To study the current and future applications of AI in research and policy formulation for sustainable development, while highlighting ethical considerations from UNESCO's guidance on AI

Methodology: Following the Preferred Reporting Items for Systematic reviews and Meta-Analysis (PRISMA) in the following databases: Scopus, EMBASE, PubMed, CINAHL, Web of Science, the Cochrane Library, Research gates and Google scholar was used to source related and relevant articles. A literature review of UNESCO's guidance documents and case studies on AI's role in sustainable development was conducted. According to the preset inclusion and exclusion criteria, only articles that discuss the role of AI in education, research and training were considered.

Results: Thirty reputable articles were utilized for the study. The study findings reveal the limited usage of the methods, whereas SR methods have great potential for implementation in clinical application of research. It improves the capability of existing research. It has current applications and implications, and it is a vital evidence-based approach in Research, policy formulation and development. AI has significantly enhanced research capabilities, enabling better environmental monitoring, climate modeling, and resource management. However, future applications must address ethical concerns, ensuring AI is used responsibly and inclusively.

Conclusion: AI in education is a promising solution for the future of education. Moreover, a more holistic perspective of applications, opportunities, and challenges from a programmatic and pragmatic perspective will validate a sustainable implementation of AI solutions. AI offers transformative potential for sustainable development, but its success depends on ethical use, transparency, and ensuring it complements human decision-making. UNESCO's guidance underscores the need for responsible AI deployment to achieve equitable and sustainable growth. Potential new capabilities provided by AI offer exciting prospects for more efficient and effective research.

Key words: Artificial Intelligence, Sustainable Development, Policy Formulation, UNESCO, Ethical AI

Artificial Intelligence in Pharmacognosy: Advancing Natural Product Discovery and Quality Control

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Abstract

Purpose: This research explores how artificial intelligence (AI) can drive advancements in pharmacognosy, transforming traditional methods in the identification, quality control, and analysis of natural bioactive compounds. By addressing the challenges of complex data management and time-intensive compound screening, AI offers promising solutions for enhancing natural product-based drug discovery.

Underpinning Theory: AI, particularly through machine learning (ML) and deep learning (DL), enables pharmacognosists to manage and interpret large biochemical datasets efficiently. These models are adept at predicting compound bioactivity, elucidating complex molecular structures, and screening extensive natural product libraries. In natural product research, AI enhances high-throughput screening, rapidly assessing bioactive compounds against diverse biological targets. Predictive metabolomics allows researchers to model metabolic pathways and mechanisms of action, essential for evaluating medicinal potential. Furthermore, AI plays a crucial role in the quality control and standardization of herbal medicines by analyzing chemical profiles, detecting contaminants, and ensuring product reliability. Advances in ethnobotanical data analysis through AI also allow for the integration of traditional medicinal knowledge, identifying potential leads for new drug discoveries.

Conclusion: Integrating AI into pharmacognosy can make the field more efficient and accurate, enhancing drug development from natural sources and offering standardized, reliable herbal products. These advancements support the growing need for accessible and safe plant-based therapeutics.

Recommendations: Policymakers should support AI-driven pharmacognostic research by funding AI model development and establishing regulatory frameworks for ethical AI use. Practitioners are encouraged to collaborate with data scientists, incorporating AI tools for quality control, bioactivity prediction, and personalized natural product-based treatments, ultimately advancing the reliability and accessibility of plant-derived therapeutics.

Keywords: Artificial intelligence, Predictive metabolomics, Ethnobotanical data, Standardization

Prospective Cohort Study on the Impact of Artificial Intelligence on Chronic Disease Management Among Adult Patients at the University of Ilorin Teaching Hospital

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Abstract: *Chronic diseases, including diabetes, cardiovascular conditions, and obesity, present significant challenges to global healthcare systems. This study evaluates the effectiveness of artificial intelligence (AI)-driven personalized interventions in enhancing health outcomes for individuals with chronic diseases. A prospective cohort design was employed, involving 300 patients with chronic conditions who were randomly assigned to either an AI-assisted personalized intervention group (n = 150) or a Chronic Disease Management (CDM) group (n = 150). The AI system utilized machine learning algorithms to analyze patient data and provide tailored recommendations for lifestyle changes and medication adherence.*

Patients in the AI intervention group demonstrated notable improvements compared to the CDM group. These included reduced hospitalization rates (Beta: 0.649, t: 13.816, $p < 0.001$), improved medication adherence (Beta: 0.016, t: 0.321, $p = 0.748$), increased physical activity (Beta: 0.004, t: 0.073, $p = 0.942$), and significantly lower HbA1c levels (Beta: 0.244, t: 4.279, $p < 0.001$). These findings highlight the potential of AI in advancing chronic disease management, offering improved health outcomes and quality of life.

The study underscores the need for further exploration of the long-term sustainability of AI-driven interventions and their integration into healthcare systems. Additionally, understanding patient and provider acceptance will be crucial for widespread adoption. These findings suggest that AI has the capacity to revolutionize chronic disease care, reducing healthcare burdens while enhancing patient wellness and outcomes.

Keywords: Chronic Diseases, Artificial Intelligence, Personalized Medicine, Healthcare Management.