

2025 IEEE International Conference on Emerging Trends in Engineering and Computing (ETECOM 2025)

**Riffa, Bahrain
29-30 October 2025**

Pages 1–511

IEEE Catalog Number: CFP250S7-POD
ISBN: 979-8-3315-6617-3



Copyright © 2025, IEEE

All Rights Reserved

Copyright and Reprint Permissions:

Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

*** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.

IEEE Catalog Number:	CFP250S7-POD
ISBN (Print-On-Demand):	979-8-3315-6617-3
ISBN (Online):	979-8-3315-6616-6

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA

Phone:	(845) 758-0400
Fax:	(845) 758-2633
E-mail:	curran@proceedings.com
Web:	www.proceedings.com

TABLE OF CONTENTS

Optimizing Home Energy Consumption with Renewable Sources Using Marine Predators Algorithm: An AI-Based Approach	1
<i>Abdulaziz Aljabbab, Waleed M. Hamanah, Mohammad Ali Abido</i>	
Optimized EV-Based Reactive Power Support for Enhanced Distribution Grid Performance	7
<i>Ahmed A. Alguhi, Essam A. Al-Ammar, Ghazi A. Ghazi</i>	
Integration of Smart Waste Bins in Reverse Logistics : A Brief Review	13
<i>Najat Almasarwah, Rula Alrawashdeh, Alanood A. Alsarayreh</i>	
Experimental Study on Low-Velocity Impact Response of Al6082 Aluminium Alloy at Different Temperatures	21
<i>Omer Sulaiman Hamed Al-Shabibi, Rabé Andersson</i>	
Towards Carbon-Neutral Campuses: Design, LCA, and Economic Analysis of a 140 kW Solar PV Installation	28
<i>Ahmed A. Mohamed, Mohammad Salameh, Badreya Mirza, Mohammad A. Shbool</i>	
Ranked Set Sampling for Efficient Ensemble Kalman Filtering	32
<i>Jaafar Almutawa</i>	
Modes of Assessment in Pre-Calculus Students	38
<i>Russina A. Eltoun, Hanadi M. Abdelsalam, Maura Pilotti</i>	
The Double-Edged Sword of Generative AI: Enhancing or Hindering Students' Intellectual Growth?	44
<i>Nina Abdul Razzak</i>	
Digital Natives, AI Strangers? Investigating AI Knowledge in University Classrooms	51
<i>Ali Ateeq, Sana Arshad, Fahad Manzoor, Hanan Naser, Siddig Balal Ibrahim, Nasser A. Saif Almuraqab</i>	
Getting To Know Calculus Students Through a Case Study of an Unrepresented Population	58
<i>Russina Eltoun, Saira Waheed, Ibtisam Daqqa, Sumiya Nasir, Maryam BoJulaia, Maura Pilotti</i>	
Protecting Privacy in Immersive Learning: Investigating University Strategies for Governance and Student Awareness	64
<i>Rozali Badaoui, Klara Kövesi, Nicolas Jullien, Layla Tannoury</i>	
From Data to Action: Narrative Benchmarking and Comparative Evaluation of Explainable AI-Driven Supervised Machine Learning Models for Academic Risk Prediction	72
<i>Lilibeth Azuela, Herbert Azuela, Anna Lyza Felipe, Armin Aragoncillo, Mia Eleazar</i>	
Collaborative Learning with Technology: A Quasi-Experimental Study in Social Sciences	79
<i>Johanna Alexandra Palacios-Arcos, Aracelly Fernanda Núñez-Naranjo, Renato Toasa Mauricio Carvache-Franco, Orly Carvache-Franco, Lidia Minchenkova</i>	
Explainable AI-Driven Chronic Kidney Disease Prediction System	85
<i>Muhammad Ahmad Khan, Muhammad Rizwan, Saira Ali Bhatti, Maqbool Khan</i>	
From Concepts to Netlists: A Three-Tier In-Context Evaluation of LLMs in Analog Circuit Design	91
<i>Moustafa Nawito</i>	

A Graph-Based Approach to Anomaly Detection in Windows Event Logs for Enhanced Digital Forensics and Incident Response (DFIR)	97
<i>Saad Alzubari, Shahnawaz Khan</i>	
Exploring ADHD in the Female Brain Through Multimodal Machine Learning	104
<i>Ayah Alqassab, Roxane Elias Mallouhy, Mashael Alqahtani</i>	
Pattern Recognition in Phase I Control Charts via Multimodal 2D Convolutional Neural Networks: A Fusion of Visual and Numerical Data	110
<i>Saleem Ramadan, Najat Almasarwah</i>	
Development of EmoBrace: A Wearable Human Emotion Detection	117
<i>Yousef Elsonbaty, Baraa T. Sharef</i>	
The Application of Long Short-Term Memory on Voltage Sag Prediction	125
<i>Ibrahim Alkhaleel Altayara, Essam A. Al-Ammar, Yasser Bin Salamah</i>	
SMART CANE: Computer-Aided Navigation Empowering the Visually Impaired	130
<i>Amna Bubshait, Rawan Albinzayed, Reem Burshaid, Zahra Alshehabi, Herbert Azuela</i>	
Machine Learning Frameworks for Business Decision-Making	138
<i>Muneera M. Al Khalifa</i>	
Bahrain's GDP Forecasts through Econometric and Machine Learning Models	147
<i>Sherif A. Moussa, Fawaz Mustafa, Ahmed Abdelfattah, Nourhan Emad ElDin</i>	
Navigating the Future of Business: A Review of Key Technology New Trends for 2025 and Beyond	154
<i>Nahed Salman, Wafa Salman</i>	
DermaAI: An AI-Driven Deep and Machine Learning Platform for Real-Time Skin Disease Diagnosis in Healthcare	160
<i>Zainab Al-Qurashi, Fatma Al-Junaibi, Shaima Al-Wahaibi</i>	
Reversible Watermarking Technique in Encrypted Medical Image for Authenticity Achieving	167
<i>Shahad Thamear Abd Al-Latief, Muhammad Majid Taha Al-Ani, Hadeel M Saleh, Saly Talib Alwan</i>	
<i>Noor Raji Mohammed, Shaymaa Majeed Hameed, Tayseer Hindy</i>	
AI Tools and Healthcare Transformation: The Enabling Roles of Technology, Workforce, and Strategy	172
<i>Ali Ateeq, Mohamed Hamdan H Alrwili, Mohammed El-Astal, Hanan Naser, Nasser A. Saif Almuraqab</i>	
<i>Shafeeq Ahmed Ali</i>	
Improving Edge-Case Performance in Wound Image Segmentation via Test-Time Augmentation	179
<i>A. Louvart, V.-D. Nguyen, W. Haertle, K. Bensafia-Cherfa, C. Hoffmann, A. Mansour</i>	
The Dawn of Intelligent Solar in Smart Tracking for Optimized Energy Yield	183
<i>Gaydaa AlZohbi</i>	
Utilizing Virtual Reality for Environmental Impact Assessment in Engineering Projects	189
<i>Azizah Alharshan, Zainab Zahri, Shoog Alsubaei, Gaydaa AlZohbi</i>	
Sustainable Compression Optimization in Gas Gathering Networks Using AHP: A Multi-Criteria Decision Approach	197
<i>Iftikhar Ahmed, Ali Hasnain, Shahbaz Abbas, Yasir Ahmad, Faheem Qaiser Jamal, Iftikhar Ahmad</i>	
<i>Muhammad Usman</i>	

Women's Role at Waste Treatment Facilities Based on the Circular Economy to Support the Smart Environment Initiative	206
<i>Nabhan Muhammad Syauqi, Fauzan Romadlon, Wan Nurul Karimah Wan Ahmad</i>	
Novel Fault Tolerant Dual-Input LLC Resonant DC/DC Converter with Hybrid PWM-PFM Control for HVDC Interconnection	212
<i>Lin Myat, Masahiro Furukakoi, Akie Uehara, Hiroshi Takahashi, Tomonobu Senjyu</i>	
Optimal and Resilient Operation of Small-Scale Land-Based Aquaculture Facilities Using Renewable Energy and V2X Electric Vehicles	218
<i>Soichiro Ueda, Takuma Ishibashi, Shinya Yamamoto, Kein Nijima, Akie Uehara, Tomonobu Senjyu</i>	
Installed Capacity Optimization in Multi Energy Smart Apartment Building Using Multi Objective Optimization	223
<i>Shinya Yamamoto, Masahiro Furukakoi, Akie Uehara, Hiroshi Takahashi, Ashraf M. Hemeida Edward Randolph Collins, Shriram S. Rangarajan, Tomonobu Senjyu</i>	
Microgrid Energy Management- An Optimization Approach for Operational Cost Reduction	229
<i>Rona George Allwyn, Vijaya Margaret, Amer Al-Hinai</i>	
Hierarchical DDoS Attacks Classification for IoT Networks Using Ensemble Learning	237
<i>Hussein Barakat, Ahmad Hani El Fawal, Ali Mansour, Abbass Nasser, Hussein El Ghor</i>	
An Energy-Efficient FPGA Accelerator for Edge AI Inference applications with unified dataflow for both Convolutional Neural Network and Depthwise Convolutional Neural Networks	243
<i>Amr Attia, Moheb Mekhail</i>	
A Fully-Tunable, Energy-Efficient, Bulk-Controlled, Analog Integrated Gaussian Function Circuit for AI Applications	253
<i>Theodoros Kantianis, Daniela Papa, Emiliios Georgiou, Vasileios Moustakas, Vassilis Alimisis Paul P. Sotiriadis</i>	
An Energy-Efficient Analog Integrated Neural Network for Early Stage Diabetes Risk Prediction	259
<i>Vassilis Alimisis</i>	
IoT-Based Fault Detection and Actuation System for Single-Phase Induction Motors	265
<i>Munirun Nessa, Nafuna Margaret, Md Tanvir Al Islam, Azmeri Maisha Zaman, Md Saif Kabir Mohammed Thushar Imran</i>	
Cloud-Based Load Management in Smart Grids	271
<i>Laith Ali Abdul-Rahaim, Sara Khalaf Goad, Intisar Kareem AL-Shaeli</i>	
A Power-Efficient Analog Integrated Neural Network for Heart Disease Classification	278
<i>Vassilis Alimisis, Andreas Papathanasiou, Anna Mylona, Vasileios Moustakas, Konstantinos Cheliotis Paul P. Sotiriadis</i>	
Self-Organizing Edge Computing Framework for Smart Cities using SUMO	284
<i>Nancy Boughannam, Alaaeddine Ramadan, Sofiane Hamrioui, Chamseddine Zaki, Abbass Nasser Pascal Lorenz</i>	
Designing AI Tutors for Scalable Growth: Product Management Frameworks for Balancing Learning Impact and Commercial Success	292
<i>Durga Krishnamoorthy, Raghu Para</i>	

A COBIT-Based Framework for Assessing the Maturity Level of Sinau Digital Unesa	298
<i>Renny Sari Dewi, Raya Sulistyowati, Prayudi Setiawan Prabowo, Restiyan Effendi, Marisa Intan Prawesti Putri Amaliyah, Dzul Yaa Dzune, Atika Naiylatan Syirfa</i>	
Optimizing Flappy Birds in Passing Objects Using Deep Reinforcement Learning (DRL)	304
<i>Ilham Saputra, Adhan Efendi, Efrem Olivio Gomes, Yohanes Sinung Nugroho</i>	
Driver Drowsiness Detection Using Machine Learning and Computer Vision Techniques	310
<i>Nadhira Khezami, Ilyes Boulkaibet, Bilel Neji</i>	
Grayscale Skin Cancer Classification through Cubical Persistence Diagrams and Residual Neural Networks: A Topological Data Analysis Approach	316
<i>Abbass Rammal, Mageda Sharafeddin, Sajed Hamdan</i>	
XAI-RiskNet: Explainable Ensemble Learning for Robust Firm Default Prediction Under Economic Stress	324
<i>Husain Al Mubarak</i>	
Spontaneous Deception Detection Using EEG Signals: Advances, Challenges, and Future Directions in Deep Learning Frameworks	331
<i>Tanmayi Nagale, Anand Khandare</i>	
Neural Network-based Doppler Estimation for Orthogonal Time Frequency Space Systems	337
<i>Peng Chen, Yue Rong</i>	
Edge AI for Voice-to-Symptom Clinical Intake and Triage	343
<i>Krishna Sathyan, Tianxiang Lu</i>	
Operational Optimization for Smart Cities Integrated with Data Centers	349
<i>Takuma Ishibashi, Akie Uehara, Masahiro Furukakoi, Hiroshi Takahashi, Tomonobu Senjyu</i>	
Intrusion Detection on Resource-Constrained IoT Devices with Hardware-Aware ML and DL	355
<i>A. Diab, A. Chehade, E. Ragusa, P. Gastaldo, R. Zunino, A. Baghdadi, M. Rizk</i>	
A Lightweight Deep Learning-Based Intrusion Detection Framework for IoT Edge Networks: Evaluation on the AWID Dataset	361
<i>Mohamad Ahmad Maad, Mohamad Hamoush, Abd El Salam A. Al Hajjar, Nazem Chamaa, Bassam Daya</i>	
Evaluated Performance of Software Defined Networking vs. Traditional Networks using Mininet emulator	367
<i>Arwa Hamed Salih Hamdany, Ahlam Fadhil Mahmood, Ola Marwan Assim</i>	
Adaptive Mode Switching for Energy and Performance Optimization in NB-IoT	373
<i>Mohamad Kheir El Dine, Hussein Al Haj Hassan, Chamseddine Zaki, Azza Moawad, Abbass Nasser Ali Mansour</i>	
GSM over Satellite: A conceptual design for Rural Mobile Communication Networks	379
<i>Francis Enejo Idachaba</i>	
Optimizing Linux Log Analysis for Sustainable Computing: Leveraging Manticore Search and Logstash for Faster, Resource-Efficient Insights	385
<i>Kamil Badereldine, Nancy Boughannam, Mahmoud El Samad</i>	
Operationalizing Privacy by Design and Default: A Standards-Aligned Framework for Digital Systems	392
<i>Muneeb Imran Shaikh</i>	

Modernizing Image Retrieval Systems: a VAE-Driven Approach for Embedding Alignment and Cost-Efficient Migration in Image Retrieval Pipeline	399
<i>Vysakh S Mohan, K N Gowri</i>	
Comparative Analysis of Malicious Traffic Detection Across Code Based and Automated Platforms	404
<i>Dani Merhi Bleik, Ahmad Hani El Fawal, Ali Mansour, Abbass Nasser, Hussein El Ghor</i>	
Advance Agricultural Precision: Chili Plant Disease Prediction by DenseNet121 with images	410
<i>Munir Ahmad, Tengku Mohd Afendi Zulcaffle, Muzammil Ahmad Khan</i>	
AutoML-Driven Churn Prediction in the Telecom Sector: a PyCaret-Based Business Analytics Framework	417
<i>Mohamad Dekmak, Firas Abdallah, Mohammad Hajjar, Bilal Hussein</i>	
Ontology Based Recommender System for First Aid Emergency Response	421
<i>Husain Ali Habib Alaali, Sohail Safdar, Rehan Akbar</i>	
Sentiment and Emotion Analysis of Airline Customer Reviews from a Travel Review Platform	427
<i>Magdy Helal, Kaushik Nag</i>	
Mapping User Sentiment in Digital Lending Apps	434
<i>Shakti Kant Sharma, Roshan kumar, Punam Devi, Kriti Kishor</i>	
Reliability Analysis of Hybrid RF-FSO UAV-Assisted Communications with Energy-Harvesting Sensor Nodes in Hyper-Rayleigh Fading Channels	440
<i>Aleksey S. Gvozdev, Semyon O. Mozhukhin</i>	
Enhancing Ambient Backscatter Communication via IRS: A Comparative Study of Deployment Strategies	445
<i>Sarah Ismail, Abbass Nasser, Alaaeddine Ramadan, Chamseddine Zaki, Sofiane Hamrioui, Pascal Lorenz</i>	
Hybrid Beamforming for mmWave V2X Using Simulated Annealing with Local Search	451
<i>Mandavi Dubey, Pi-Chung Wang, Vijay Dubey</i>	
Satellite-Based Solar Power Harvesting Via Microwave Antennas: Technical Innovations With GCC Perspectives	457
<i>Husaina Mustafa Virpurwala, Shiza Haleem, Chuyao Zhou, Mervat Madi, Mohd Fareq Abd Malek</i>	
Residual Surrogate Framework for Delay and Fallback Prediction in Multi-Hop LoRaWAN	462
<i>Vijay Dubey, Mandavi Dubey, Nen-Fu Huang</i>	
Energy-Aware LoRaWAN via Dual Optimization of Spreading Factor and Transmit Power	468
<i>Houssein Taleb, Mohammad Jaffal, Guillaume Andrieux, Alain Ajami, Maxime Mroue, Abbass Nasser</i>	
Detection of Wormhole Attacks in MANETs Using Artificial Intelligence Techniques	475
<i>Zainab Bashir Ibrahim, Mayada Faris Ghanim</i>	
Systematic Literature Review: AI and ML Applications for Latency Prediction and Performance Enhancement in Passive Optical Networks (PONs)	485
<i>Sameh Foulad</i>	
Machine Learning-Based Beam Forming Prediction for Energy-Efficient 6G mmWave	495
<i>Ahmad Abadleh, Yazan M. Allawi, Aymen I. Zreikat</i>	

Ultrasound-Based Breast Cancer Diagnosis: A Dual-Module Deep Learning Framework for Classification and Lesion Segmentation	500
<i>Hawraa Hotiet, Marwan AlHawat, Mohamad Abou Ali, Abdallah Kassem</i>	
A Data-Augmented Deep Hybrid Model for Atrial Fibrillation Detection	506
<i>Hassan Serhal, Rana Saab, Shakib Youssef, Tala Abdallah, Aya Hage Chehade, Maissa Abdallah</i>	
Efficient Chest X-Ray Classification via Knowledge Distillation: Realizing Edge-Ready Deep Models	512
<i>Sarah Rashidi, Hussein Hazimeh, Hassan Harb</i>	
A Comparative Assessment of Preprocessing and Feature Extraction Pipelines for EEG-Based Inner Speech Recognition	518
<i>Rana Saab, Nassib Abdallah, Bassam Daya, Abd El Salam Al Hajjar, Jean-Marie Marion</i>	
Fusion of regional and pixel-level plantar pressure features for Diabetic peripheral neuropathy detection	524
<i>Nohad Fawaz, Nassib Abdallah, Bassam Daya, Jean-Marie Marion, Antoine Chatrenet, Pierre Chauvet</i>	
Evaluating MLLM Security for the Arabic and French Languages	530
<i>Razane Abdallah, Majed Sanan, Mohamad Nassar</i>	
Leveraging Transfer Learning for Robust ECG Abnormalities Detection	537
<i>Ebrahim Alboghbaish, Gulden Eleyan, Shahbaz Baloch, Mohammad Al-Abed, Bilel Neji, Alaa Eleyan</i>	
Efficient ECG Anomaly Detection Using Autoencoder-Based Dimensionality Reduction: A Comparative Study of Machine Learning Algorithms	541
<i>Shahed Alam, Md Saif Kabir, Mohammad Ariful Haque</i>	
AI-Driven Multi-Level Delta-Sigma Modulator for Software Defined Radios in 6G	547
<i>Fahmi Elsayed, Mohammad Salman, Ahmed Shdefat, Mostafa Rashdan, Ahmed Youssef, Nour Mostafa</i>	
Integrating Clustering and Grey Wolf Optimization-Based Linear Classifier for Early Prediction of Type 2 Diabetes	553
<i>Anandhavalli Muniasamy</i>	
A Lightweight Adversarial and Graph-Cut Hybrid Framework for Accurate and Fast Brain Tumor Segmentation in FLAIR MRI	559
<i>Roa Soloh, Mahmoud El Batish, Lara Abou Orm</i>	
How Far Can a Linear Model Go? Federated SVM Models for Security Requirements Classification	565
<i>Waad Alhoshan</i>	
An Intelligent System for Classifying Fertilized Eggs Using Convolutional Neural Network and Transfer Learning Technique	571
<i>Efren D. Villaverde, Aubee T. Mahusay-Ecleo, Maurino N. Abuel, Maurine C. Panergo, Renato R. Maaliw</i>	
DeepTriad: A Hybrid Deep Learning Framework for Video Anomaly Detection Using FlowNet, ResNet50, and RCNN	577
<i>Mishwa Jani, Divya Gohil, Hetvi Gor, Dharmesh Tank</i>	
Detection of Peripheral Neuropathy from Walking Videos Using Pose Estimation and Anatomical Segmentation	583
<i>Liwaa Albanna, Nassib Abdallah, Bassam Daya, Jean-Marie Marion, Antoine Chatrenet, Pierre Chauvet</i>	
A Crowdsourcing Approach for Increasing Multimedia Data in the Kurdish Language	589
<i>Muslim Ahmed, Ahmad Shwan, Aland Ameer</i>	

Impact of Perceived Risks on Resistance to Generative AI in Engineering Education	593
<i>Mario N. Vargas-Bejarano, Darla A. Castillo, Rodrigo A. Crisostomo, Nicolas A. Nunez</i>	
Rewiring the Classrooms: A Narrative Review of Artificial Intelligence in Engineering Education	600
<i>Renato R. Maaliw, Maria Rossana D. de Veluz, Zoren P. Mabunga, Pitz Gerald G. Lagrazon</i>	
<i>Maurine C. Panergo, Aubee T. Mahusay-Ecleo</i>	
Classrooms Without Borders: Charting Innovative Pathways for Artificial Intelligence in Education	606
<i>Renato R. Maaliw, Jovela I. Peñaojas, Marissa C. Esperal, Ricaryl Catherine P. Cruz, Shiela M. Manzanilla</i>	
<i>Gillian Portia P. Dimaranan</i>	
PowerPoint Rehearsal Coach as an AI-Powered Tool for Assessing and Enhancing Student Presentation Skills	612
<i>Saleem Hamady, Mirvat Abdallah</i>	
A DEMATEL-based causal analysis of education 4.0 adoption barriers: evidence from southern technical university in Iraq	617
<i>Susan Sabah Abdulameer, Yousif Munadhil Ibrahim</i>	
The Level of Awareness and Utilization of AI Educational Applications by Faculty Members in Teaching Engineering Subjects	623
<i>Marwan Hameed, Qusay Hatem Alsultan, Yasir Khalaf Rashid, Bilal Tariq Hussein Allwan</i>	
<i>Othman J. Alhayali</i>	
A Nigerian Artificial Intelligence Adoption Framework for Education Using the Barrett Model: A Values-Driven, Data Protection–Embedded, Language-Inclusive Blueprint for Teaching and Learning	633
<i>Amina Sambo-Magaji, Muyideen D. Adewale</i>	
Data Without Depth	639
<i>Constantine Andoniou</i>	
Developing a Real-Time Student Admission Platform Using the System Development Life Cycle (SDLC) Approach	645
<i>Ega Adrianto, Fauzan Romadlon</i>	
A Comparative Analysis of Machine Learning Algorithms for Diabetes Prediction Using Numerical-to-Image Data Transformation	653
<i>Maurine C. Panergo, Zoren P. Mabunga, Jennifer C. Dela Cruz, Renato R. Maaliw</i>	
Explainable Quantum Artificial Intelligence for Enhanced Radiology Decision Support	659
<i>Sundaram K Meenakshi, Saraswathi V, Malathy M, Subbulakshmi G</i>	
Comparative Assessment of Ensemble and CNN Models for the Detection of Downy Mildew in Diverse Vegetable Datasets	666
<i>Supreetha S, S H Manjula</i>	
Brain Cancer Classification Using Topological Data Analysis and Machine Learning	672
<i>Kacim Mohammad, Assaf Rabih, Mourad Oumar, Ghostine Christelle, Rammal Abbas</i>	
An Efficient Grid-Based Path Planning Approach Using Giant Trevally Optimizer with Path Simplification	678
<i>Haval Tariq Sadeeq, Thamer Hassan Hameed, Reber Ahmed Mohammed, Dindar Mikaeel Ahmed</i>	
Live Detection and Mitigation for SSH Brute Force Attacks	684
<i>Nael Zahreldine, Amer Jaber, Ahmad Hani El Fawal, Dani Merhi Bleik, Ali Mansour</i>	

Hamming Distance Method-Based Stator Inter-Turn Short Circuit Phase Detection in PMSM	689
<i>Krishna Kumar, Viswanathan Vaiyapuri, Sivakumar Nadarajan</i>	
Applying Six Sigma DMAIC for High-Performance Optimization of Pit Stops in Formula 1 Racing	695
<i>Abdulaziz Kadhém, Haidar F. AL-Qrimli, Fawaz Mustafa, Khalid Zeyad</i>	
The Boeing 737 MAX 8 Deadly Crisis: A Quality Control Analysis	699
<i>Mahmood Yaqoob, Haidar F. Al-Qrimli, Fawaz Mustafa, Khalid Zeyad</i>	
Design & Implementation of Navigation Mode Switching in Tele-Operated Vehicles	704
<i>Eman Sarah Afi, Amina Mseddi, Sofiane Sayahi, Hichem Besbes</i>	
Detection of Hangars in Geospatial Imagery Using Deep Learning	714
<i>Hussein Assaf, Mostafa Rizk, Nour Mostafa</i>	
Analyzing Emergency Medical Service Response Times to Road Crashes in Al-Baha, Saudi Arabia: A Spatial and Temporal Assessment	720
<i>Nami Alsulami, Ahmed Kabli</i>	
Enabling Equitable EV Charger Deployment in Berlin with Multi-Objective Geospatial Optimization	727
<i>Clifford Omari Ondieki, Tianxiang Lu</i>	
E-Government as a Tool for Reforming Land Holding Systems in Nigeria: Legal Challenges and Future Pathways	733
<i>Joseph Ochayi Sunday, Clement Chidi-Ife Chigbo, Udosen Jacob Idem, Ebenezer Tunde Yebisi Abiodun Ayodele Ojo</i>	
Early Warning and Real-Time Tracking Systems for Communities Against Banditry Attacks	740
<i>Francis Enejo Idachaba</i>	
Fake News Detection Research Using NLP (2017– 2025): A Bibliometric Analysis	746
<i>Maryam Boumazzourh, Chouaib Moujahdi, Soumia Ziti</i>	
Modeling Survival in Head and Neck Cancer: The Impact of Harmonization and HPV Stratification on Multimodal Radiomics	752
<i>Mohamad Hamoush, Nassib Abdallah, Bassam Daya, Jean-Marie Marion, Mathieu Hatt</i>	
Generative AI-Based Hypothesis Generation for Self-Evolving Machine Learning in Research Applications	758
<i>Damodhara Reddy Palavali, Suneetha Pothireddy</i>	
Transformer Based Pipeline for Tomato Leaf Disease Detection and Intelligent Knowledge Augmentation	766
<i>Viraj D Talathi, Laxmi B Rananavare</i>	
Cross-Lingual Approaches to Arabic Argument Mining Using mBERT	772
<i>Yusuf Alatawi, Hasan Kadhém</i>	
Machine Learning in Geotechnical Engineering: A State-of-the-art Review of Research Progress and Barriers to Real-World Implementation	778
<i>Wafa Alnuzha Alzighaibi, Firas Daghistani</i>	
Hybrid Deep Learning for Early Detection of Chronic Obstructive Pulmonary Disease Related Respiratory Events from Lung Sound Recordings	783
<i>Isra'a Misto, Nassib Abdallah, Bassam Daya</i>	

A Comparative Analysis of Machine Learning and Deep Learning Models for Student On-Time Graduation Prediction	789
<i>Minh Cong Dinh, Vien Thuc Ha, Dung Hai Dinh</i>	
Automated Avian Vocalization Classification and Geospatial Visualization System- A Web-Based Approach for Biodiversity Monitoring	796
<i>Karan Singh Gurjar</i>	
Advancing English-Dogri Machine Translation: A Comparative Study of SMT and NMT Approaches	803
<i>Parveen Rana, Aadil Ahmad Lawaye, Mansoor Farooq</i>	
Alzheimer's Disease Analysis Using Graph-Based Deep Learning Techniques	813
<i>Manoj Viswanadhapalli, Selvan C</i>	
Interpreting Startup Partnership Potential: A Case Study of Digital Startups Using ID3 Decision Trees	822
<i>Van Thanh Tran, Tobias Ametsbichler, Dung Hai Dinh</i>	
Comparative Study of Deep Learning Architectures for the Estimation of Cerebral Blood Flow Velocity	827
<i>Mohammad Al-Abed, Alaa Eleyan, Rong Zhang, Khosrow Behbehani</i>	
Transformation-Based Semi-Symbolic Regression	832
<i>Ali Ridha Ali</i>	
What Are the Mechanisms That Support Healthcare Professionals to Adopt Artificial Intelligence Into Practice?	838
<i>Christopher McCaig</i>	
Towards Counterfactual Verification for Tree Ensembles	843
<i>Waruni Kekulandara, Kasun Amarasinghe, Erunika Dayaratna</i>	
AI Enhanced Malware Threat Detection on Internet of Healthcare Things (IoHT)	851
<i>Md Siddiqur Rahman Tanveer, Md Sakibul Islam, F. M. Jahiduzzaman, Farid Bin Beshr, Muhammad Imam</i>	
AI-based Elderly Fall Detection Using Pose Estimation and YOLO	857
<i>Layla Al Ozon, Mostafa Rizk, Abbass Nasser, Chamseddine Zaki, Bilel Neji, Taha Beyrouthy</i>	
Power Transmission Fault Detection Using Hyperparameter-Tuned YOLOv11 with XAI	863
<i>Md. Khairul Islam, Ashraful Alam Nirob, MD Rahat Kader Khan, MD Samiul Islam</i>	
Survey of Arabic word segmentation: Evaluation and Comparative study	869
<i>Hussein Awdeh, Omar Saadiyeh, Mai Khalil, Gilles Bernard, Mohammad Hajjar, Alaaeddine Ramadan</i>	
HistoScatter: A Hybrid Visualization for Resolving Overplotting in Scatterplots	877
<i>Yuanzhe Jin</i>	
AI-Based Detection of Fire and Smoke in Healthcare Facilities	883
<i>Ali Rhayem, Mostafa Rizk, Jad Abou Chaaya, Abbass Nasser</i>	
General Vs Domain-Specific Language Models for Depression Detection in Social Media and Clinical Texts: A Comparative Study	890
<i>Karima Bouchriha, Ibrahim Guelzim, Badr Hirchoua, Hammadi Nait-Charif</i>	
A Study to Establish a Relationship Between Fatigue and Emotional State	896
<i>Raneem Al Zol, Nohad Fawaz, Jad Bazzi, Bassam Daya</i>	

Human Contribution, Machine Prior Art: Re-Drawing Patentability and Practice in the Generative Artificial Intelligence Age	902
<i>Renato R. Maaliw, Nona D. Nagares, Jennifer Edytha J. Lagrazon, Giehway R. Liwanag Mary Jane R. Villaverde, Dan Mark C. Cabriga, Donna L. Tolentino, Romano L. Decena</i>	
Grey-Box AI for Cement-Free Stabilization: Interpretable UCS Prediction and Design Rules for Xanthan–PPF Clays	908
<i>Abolfazl Baghbani, Firas Daghistani, Hossam Abuel-Naga, Mohammad Mahdi Shalchian</i>	
Contextual Embedding and Deep Neural Network Pipeline for Robust SQL Injection Detection and Categorization	915
<i>Ibrahim El Bitar, Razan El Mais, Mohamad Raad</i>	
A Regime Switching Analysis of Resilience and Sustainability in Indonesia’s Islamic Banking	924
<i>Aznovri Kurniawan, Nur Iriawan, Achmad Choiruddin</i>	
A Heterogeneous Segmentation of Medical Images for Copy-Move Forgery Detection	930
<i>Anis Hijazi, Lama Affara, Ali El-Zaart</i>	
Systematic Evaluation of Similarity Metrics for Retrieval, Reranking, and Completion in Retrieval Augmented Generation Systems	935
<i>Harun Elkiran, Jawad Rasheed</i>	
MRI Image Segmentation Using an Enhanced Moment-Preserving Technique for Brain Cancer Detection	940
<i>Salma Ghali, Lama Affara, Ali El-Zaart</i>	
The Intersection of Artificial Intelligence and Cloud Computing: Trends, Challenges, and Opportunities in a Systematic Literature Review	946
<i>Laurensia Jovanka Susanto, Laurensius Ricky Fernando, Ali Gunawan</i>	
Grey-Box and Ensemble AI for Sustainable Ground Improvement: Predicting Suction of Guar-Gum-Treated Clays under Wetting-Drying Cycles with Genetic Programming and XGBoost	952
<i>Abolfazl Baghbani, Firas Daghistani, Hossam Abuel-Naga, Mohammad Mahdi Shalchian</i>	
Assessing the Impact of Blended Learning Mathematics Intervention on Civil Engineering Students’ Performance: A Post-Pandemic Evaluation Using Hierarchical Linear Modeling and Sensitivity Analysis	960
<i>Jozel Bryan M. Terrible, Jan Denniel B. Escaño, John Leander Landicho</i>	
Correlating Cognitive Abilities with Programming Proficiency: A Basis for Optimized Sectioning in Educational Settings	965
<i>Glende P. Brazil, Cristina E. Dumdumaya</i>	
Computational Approach to Engagement Analysis in Learning Management Systems: Optimizing User Interactions with XGBoost Algorithm	973
<i>Virginia B. Verdun, Cristina E. Dumdumaya</i>	
Excitation Phases Prediction Using Advanced AI Approaches for Beam Steering in Patch Antenna	981
<i>Malak Sultan, Mohamad Hamoush, Bassam Daya, Alhussein Akoum, Elias Rachid</i>	
Toward Green LLMs: Computational and Environmental Implications of Knowledge-Enhanced ABSA Models	986
<i>Souha Al Katat, Chamseddine Zaki, Hussein Hazimeh, Ibrahim El Bitar, Rafael Angarita, Lionel Trojman</i>	

Optimized Cooperative Spectrum Sensing for IoT: Balancing Energy, Delay, and Detection	993
<i>Abbass Nasser, Chamseddine Zaki, Jad Abou Chaaya, Bilel Neji, Taha Beyrouthy</i>	
Ensemble of Regressors to Handle Bias in Predicting Age from Facial Images	998
<i>Shehroz S. Khan, Tianyu Shi, Charlene H. Chu, Nour Moustafa, Ahmad Ashraf</i>	
A secure routing protocol for underwater acoustic sensor networks using reinforcement learning	1004
<i>Muhsin Hassanu Saleh, Haifa Takruri, Raja Ujjan, Manesh Thankappan, Danial Javaheri</i>	
<i>Rukayya Musa Ismail</i>	
Stakeholder Collaboration for Smart City Development in Malaysia: A Triple Helix Perspective	1010
<i>Khairul Azizan Suda, Nazatul Shima Abdul Rani, Ibtessam Boubekeur</i>	