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<i>Merlin Reju Mathew, S. Jeba Priya, S. Salaja</i>	
A Survey and Comparative Analysis of Shot Boundary Detection Techniques	1795
<i>M Nivethitha, A Kethsy Prabavathy, S Salaja</i>	
AI-based Grain Spoilage Prediction and Shelf -Life Estimation using Environmental Data	1803
<i>Gayathri K, Julia Punitha Malar Dhas, Salaja S, Deva Priya Isravel</i>	
Integrating Sentiment Analysis with Quantitative Models for Dynamic Portfolio Allocation	1809
<i>Minal Dhankar, Neha Gupta</i>	
AI-Powered Grievance Redressal System using TrOCR and DistillBERT	1816
<i>S. Aloysius Jelcy, Anlet Sheenu M, Swathy Krishna M, Baron Sam B, S. L. Sindha Devi, S.Reny</i>	
Automated Plant Disease Detection and Integrated Crop Care Recommendation	1822
<i>P.Kalaivani, S.Ramakrishnan, Gobika P, Charumathi S, Swetha R</i>	
PhishShield ML: A Dual-Platform Machine Learning Framework for Real-Time Phishing URL Detection	1829
<i>Madhura Naik, Archana A</i>	
Website Content Categorization in Search Engine Optimization using Machine learning Classifiers	1838
<i>A. Thilagavathy, P.R. Therasa, Lalitha R, Dilip Charaan R.M, S. Mary Diana, Notam Kedari</i>	
VariantWise: An Explainable Multi-Agent KG Framework for Automotive Recommendation	1845
<i>Prakhar Grover, Abhinav Patnaik, Kanav Nijhawan, Helen Victoria A.</i>	
AirInsight: A Decentralized Real-Time Air Quality Monitoring and Predictive Analytics Platform using Categorical Boosting Algorithm	1852
<i>Satyanarjan Behera, Shubham Aswekar, Trunal Avhad, Sakshi Bhaingade, Megha Trivedi, Sneha Mhatre</i>	
Semantic Change Detection in Document Revisions using Sentence-BERT Embedding Models	1860
<i>Anitha Christy Angelin, Ram Saravanan S, Sabarinath R, Saran Kumar M, Prasanth PT</i>	

Efficient Attention Integrated Deep Learning Framework for 107 Class Yoga Pose Recognition in Real Time Applications	1868
<i>Ch Ravi Swaroop, Gudimetla Tapaswi, R Shiva Shankar, K Amrutha, V VR Maheswara Rao</i>	
<i>N S Koti Mani Kumar Tirumanadham</i>	
Sockpuppet Detection in Digital Platforms: A Systematic Review of Techniques and Challenges	1876
<i>Sanket Mishra, Sukaina Fatema, Gagana V, Tarun Adith, Vaishnavi Shetty, Sumathi D</i>	
Real-Time Campus Transportation Monitoring and Notification Platform Developed with Flutter	1883
<i>C. Gayathri, Akshaya K, Gopika Malar C, Kavya A, Keerthana V</i>	
Assessing the Predictive Capability of Multiple Deep Learning Frameworks on Indian Large-Cap Equities	1890
<i>Prajwal Hegde N, Joanna Leticia Pinto, Keesha Josline Cutinha, Parthiv Venugopal, Vinay Kamath</i>	
DeepShield: Deepfake Audio-Video Authenticity Verification System	1897
<i>Vignesh S Badiger, Prakhar Srivastava, Ramya B, Velliangri S</i>	
Probabilistic Multi-Horizon Urban Water Crisis Prediction using Ensemble Machine Learning and Hydrological Feature Engineering	1903
<i>Navaneeth Bhaskar, Priyanka Tupe-Waghmare, Trisha S Shetty, Amrith R Naik, Pranav R Bhat, B J Hrutik</i>	
Predicting Asthma Exacerbations using Machine Learning	1909
<i>Ankitha K, Aastha Londhe, Swasthik S Devadiga, Ambika Jayashanthi, Jyothii Moolya</i>	
Knowledge-Augmented Visual Question Answering via Multimodal Deep Learning: A Structured Reasoning Framework	1915
<i>Noorbhasha Junnu Babu, S. P. Rajamohana</i>	
A Survey on Multi-Agent LLM Frameworks with Semantic Memory Integration and Dynamic DAG Orchestration	1921
<i>Tumma Divya, Vempaty Prashanthi, Vaskula Srikanth, Venu Gopalachari M</i>	
A Systematic Literature Review of Cross-Domain Neurodivergent Inclusion in Educational Environments	1928
<i>G.Haritha, Raja Subramanian R</i>	
Multimodal Knowledge Alignment for Social Bot Detection: Integrating Vision-Language Understanding with Behavioral Feature Fusion via Attention-Guided LSTM	1938
<i>Mallepally Kavitha, Ramesh Dadi</i>	
PI-AUNet: Physics-Informed Deep Learning for High-Resolution Atmospheric Methane Forecasting	1946
<i>Archit Rohatgi, Bhumika Malik, Kunjal Das, Kirti Garg, Jyotsna Singh</i>	
MorphX: A WHO-Aligned Ante-Hoc Explainable AI Framework for Acute Lymphoblastic Leukaemia Diagnosis from Peripheral Blood Smear Images	1952
<i>Lourdu Rayappan, R. Parameshwari</i>	
A Survey on Software Project Management	1959
<i>Pallavi Nayak, Varun S, Akshay Ravindra Paradeshi, Aditya Niranjana, Gowtham N</i>	
Faster Regional CNN Towards Detection and Prevention of Driver Fatigue and Distraction Against Road Accidents	1966
<i>Manogar.K, Chandrasekaran K, VasanthVK, Sathyamoorthy K</i>	

ADAPT-RL: Adaptive Risk-Aware Path Planning with Temporal Danger Memory and a Reinforcement-Learned Adversary	1972
<i>Sharli Iris John Baskar, Vishnu Kumar Kaliappan, Mouthami Kuppusamy, Agus Budiyo</i>	
<i>Muhamad Fatchan</i>	
Dimensional Resolution and Explainability in Genomic Artificial Intelligence: From Sequence Models to Knowledge Graphs	1978
<i>R. Venkat, K. Swathi, G. Srikanth</i>	
Acceleration-Aware Dynamic Horizon Predictive Flow Control in AI Data Center	1984
<i>Sivakumar Ashokkumar</i>	
Explainable Cross-Modal Consistency Learning with Social Graph Neural Networks for Multimodal Fake News Detection	1990
<i>A. Kranthi Koushik, T. Sree Lakshmi</i>	
AI Coach for Valorant: A Visual-Temporal Analysis System for Automated Player Feedback	1997
<i>Shalma H, B. Durga Devi, Manjuvidhya S, Priya S, S. P. Santhoshkumar, A. Kaliappan</i>	
Temporal and Multimodal Knowledge Graph-Driven Framework for Proactive Employee Turnover Prediction using Causal Explainable AI	2004
<i>Makkena Mounika, M. Senthil, Nidamanuri Srinu</i>	
An Efficient CNN-based Framework for Automated Blood Cell Classification in Hematological Disease Diagnosis	2012
<i>Ravinder Singh, Rishav Nath Kaura, Rajat Chauhan</i>	
T-EAGLE: Temporal Explainable Graph Learning Framework for Employability Prediction	2017
<i>Inkollu Krishna Sai Ram, M. Senthil, Nidamanuri Srinu</i>	
Next-Generation Cyber Threat Identification Framework using NLP and Machine Learning	2024
<i>Mallisetty Divya Sree, K. M. Rayudu, Popuri Anusha</i>	
Intelligent Insider Threat Detection in Organizations using NLP and Machine Learning-based Anomaly Detection	2031
<i>Sandya Sneha Sri Seera, Reddi Kiran Kumar, Vuda Sreenivasa Rao, Anushree A Aserkar</i>	
<i>D. Jyothi Preshiya, V Suresh Babu</i>	
E-GraphSAGE with Explainability: Edge-Centric Graph Neural Networks for IoT Intrusion Detection across Heterogeneous Datasets	2037
<i>A. Vishal Nivash, Abhishek Pahal, Aditya Pratap Singh</i>	
Cross-Domain Transfer Learning and Self-Supervised Representation Learning for Automated Histopathological Image Classification in Colorectal Cancer Grading System	2042
<i>Kavitha A, Jeya Sherlyne P, Jovita Rex A</i>	
A Study on the Impact of Artificial Intelligence on Employability: A Pre and Post AI Analysis	2049
<i>Arjun Kreshnan C.M, Ashish U.K, Adithya Krishnan, R.Kamalraj</i>	
A Multi-Stage NLP Framework for Enterprise Data Protection in Public LLM Interactions	2055
<i>Sunil Gentyala, Nimmagari Tejasri, Sunil Kumar Mudusu</i>	
An Explainable Human-Centered Federated Generative Intelligent Tutoring System for Sustainable Education	2063
<i>G. Pujitha, A. Saritha</i>	

A Custom Convolutional Neural Network for Automated Malaria Detection using Microscopic Blood Smear Images	2072
<i>Shivam, Bireswar Dass Mazumdar, Gaurav Sharma, Bharti Sharma, Neha Sharma, Vidhu Baggan</i>	
Attention-Enhanced Fine-Tuned EfficientNet-B5 for Accurate Corn Leaf Disease Classification	2078
<i>Dheeraj Malhotra, Chetna, Utkarsh Sharma, Prabhat Kumar Ravi, Satyajee Srivastava, Dhananjay Kumar</i>	
Intelligent Conversational AI System for Farmer Support and Crop Management using Hybrid NLP and Human-in-the-Loop Framework	2084
<i>Shaik Abdul Nabi, Kandala Sandhya</i>	
Document Question Answering using Retrieval-Augmented Generation (RAG) and Natural Language Processing	2092
<i>K Gattaiyah, Prakash Kammam, Aswani Kumar Unnam, Nagaraj G Cholli, Ch Ram Mohan M Senthil Kumar</i>	
PulmoNet: A Transparency-Driven Residual Learning Framework for Three-Class Lung Cancer Stratification from CT Scans	2099
<i>S. Seetharamudu, Shaik Mahaboob Basha, Soma Chaitanya, Pathan Sohail Khan Vaddi Vinith Kumar Reddy, Shaik Mohammad Nawaz</i>	
Explainable AI-Driven Skin Disease Classification with Grad-CAM Visualization and Severity Grading using Ensemble CNN	2106
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