

Contents

A CNN-SVM Model for Prediction and Classification of Alzheimer's Disease	1
<i>Amit Patra, Arnab Sahoo, Sahil Biswas, Saikat Samanta, Sirjan Murmu, and Sayantani Saha</i>	
Study of BLER and Throughput in the 5G New Radio System Having HSPA Channel and its Application in Telemedicine	12
<i>Jayanta Kumar Ray, Soumen Khatua, Quazi Mohmmad Alfred, Aitulla Labib Limon, Fariha Tabassum, Imtiaj Ahmed, Rabindranath Bera, Ramsundar Ghorai, Safiul Alam Mondal, Ranita Shee, and Malay Pit</i>	
Gender Disparities in Spatial Cognition: The Influence of Stereopsis and Mental Rotation	25
<i>Sunder Bukya, P. Phani Krishna, and Shiva Ram Male</i>	
NAVIGATE: LLM-Based Web Content Summarization to Improve Accessibility for Persons with Visual Impairments	36
<i>Divyansh Srivastava, C. P. Afsal, and K. S. Kuppusamy</i>	
Identifying Influential Genes for Breast Cancer Stages Using Genetic Algorithm with In-Depth Interpretation by Explainable Artificial Intelligence	47
<i>Subha Barai, Sweta Manna, Debosmita Roy, and Sujoy Mistry</i>	
HealthyEat-Kids: GAT-Based Food Recommendation System for Children	58
<i>Lucky Harichandan, Sasmita Kumari Nayak, and Satyabrata Lenka</i>	
Explainable AI in Prenatal Care: A Multi-feature Approach for Fetal Abnormality Detection	69
<i>Mohan P. P. Aswathi and V. Uma</i>	
PlatePal: A Deep Learning Based Food Recommendation System by Considering on Individual Health Conditions and Dietary Needs	83
<i>Abhiraj Singh, Abhishek Kumar, Digvijay Narayan Pandey, Kirti Raj, Raghavendra Kumar Singh, Aniruddha Nag, and Nandan Banerji</i>	

Advanced DeepLungCareNet: A Next-Generation Framework for Lung Cancer Prediction	94
<i>Shayak Chakrabarti, Tathagata Roy Chowdhury, Pinki Roy, and Aniruddha Nag</i>	
Optimization of Convolution Matrix Computations: A Comparative Analysis of Parallel and Dynamic Methods	106
<i>Boby Maxim and Milostnaya Natalia</i>	
Personalized Federated Learning Based Intrusion Detection System for Mitigating Privacy Attacks in IoMT	115
<i>K. Kumar and M. Khari</i>	
Multimodal Real-Time Detection System for Postpartum Depression: Integrating Facial Analysis and Clinical Assessment	125
<i>Saqlain Rashid, Adriza Sinha, and Abhishek Majumdar</i>	
Federated Learning-Enhanced Brain Tumor Prediction on Edge Networks Using MRI Imaging	140
<i>Khushbu Douhani and Samarth Sharma</i>	
Mathematical Model for Seoul Virus Using Antangana-Baleanu Caputo Derivative with Optimal Control Analysis	152
<i>Rajendran Swetha, Tharmalingam Gunasekar, Shanmugam Manikandan, Shyam Sundar Santra, Prodipto Dhali, and Shubhankar Karmakar</i>	
Long Short-Term Memory and Random Forest Framework for Industrial Emission Control	165
<i>Mandadi Sriya Reddy, Anjali Kumari, Bhoomeshwar Bala, Raja Shekar Kadurka, Mada Prasad, Vadluri Madhurima, Samala Suraj Kumar, and Kalyan Chatterjee</i>	
Dynamic Integration of Digital Twin Models for Wind Turbine and Lithium Battery in Electric Vehicle Battery Charging	176
<i>P. Sivakumar, M. Arulmozhi, S. Divya, Javad Rahebi, and Kaavya Agith</i>	
XAI4Obesity: Explainable AI for Obesity Risk Prediction	188
<i>Mauparna Nandan, Jyoti Sekhar Banerjee, Arpita Chakraborty, and Panagiotis Sarigiannidis</i>	
Detecting Synthetic Voices: A Novel Approach to Audio Deepfake Identification	200
<i>Debashri Dey, Bachchu Paul, and Utpal Nandi</i>	

An Integrated Sign Language Recognition and Health Monitoring System for Physically Challenged	209
<i>S. Tharshini, T. Sathya, M. Parimaladevi, M. Priyadharshini, S. Vinith, and R. Sibiraj</i>	
Prediction of Diabetes With Ensemble Method: Gradient Boosting Classifier	220
<i>Yash Nandkulyar, Reshmi Gupta, Shresth Saha, Tausif Kalim, Amrita Namtirtha, Sanket Dan, Trisha Bera, and Pranati Rakshit</i>	
SVEMI: An Innovative Method for PCOS Detection Using an Adapted Ensemble Machine Learning Approach	230
<i>Dishani Roy, Papri Ghosh, and Subhram Das</i>	
Advanced Skin Lesion Detection Using Fine-Tuned Xception	242
<i>Subarna Pal, Pratik Biswas, Partha Sarathi Biswas, Pritam Dan, Amrita Namtirtha, Ira Nath, and Uddalak Mitra</i>	
Early Risk Prediction of Heart Disease in Patients Using Classification Approach	252
<i>Bali Gupta, Akshay Jadhav, Vishal Gautam, and Mudit Shrivastava</i>	
Workplace Stressors, Administrative Excellence, and Patient Satisfaction: An Empirical Study of Kolkata Hospitals Using Structural Equation Modelling	266
<i>Sudeshna Chatterjee, Indranil Mutsuddi, and Rupa Paul Lodh</i>	
Question Paper Prediction Model for Examination	284
<i>Vuruvakili Varun Reddy, H. K. Tejas, A. M. Tejaswini, Rakshitha Devadiga, T. Asha, and B. S. Maaya</i>	
A Novel Numerical Representation-Based Approach for Protein Sequence Comparison Using Inter-Coefficient Difference and FFT	292
<i>Debrupa Pal, Papri Ghosh, Subhram Das, and Aurpan Majumder</i>	
Efficient Image Enhancement Model for Retinal Fundus Images Using Identric Mean With Wavelet	301
<i>G. Sakthivel and R. Manavalan</i>	
A Detailed Performance Analysis of Deepfake Detection Approaches Across Diverse Datasets	314
<i>Pawan Pandey, Arun Solanki, and Sanjay Kumar Sharma</i>	

Performance Analysis on Classification of Surgical Face Using Textural Features and PCA	325
<i>Kakoli Dey, Satadal Chakraborty, Shiladitya Chowdhury, and Aniruddha Dey</i>	
Motion Artifact Detection and Correction of fNIRS: A Comparative Study of a Novel Hybrid Filter and PCA	334
<i>Indronil Mazumder and Kumardeb Banerjee</i>	
Textual Social Data Disinformation Analysis Using a Hybrid Context-Enhanced Deep Learning Model	342
<i>Pijush Dutta, Balaji Adusupalli, Hara Krishna Reddy Koppolu, Abhishek Dodda, Mete Yağanoğlu, Jyoti Sekhar Banerjee, and Arpita Chakraborty</i>	
Voice-Based Emotion Recognition Using Convolutional Neural Networks and Support Vector Machines	353
<i>M. P. Sunil, S. A. Hariprasad, Z. Abdullah, H. D. Prarthana, Tirumala Riya, Affaf Ahmed, and Anmol Arun</i>	
Detection of Luekemia with Microscopic Image Using ML Techniques	369
<i>Subhash Prasad and Nitesh Singh Bhati</i>	
Out of Data Distribution Using Long Short-term Memory	378
<i>Riya Singh, Shilpa, and Gurpreet Singh</i>	
Privacy-Preserving Image Retrieval Based on Threshold Secret Sharing	390
<i>Rohitkumar R. Upadhyay, Sahadeo Padhye, Satyendra Singh, and Ramakant Kumar</i>	
SoK: Digital Signatures from VOLEitH	402
<i>Rohitkumar R. Upadhyay, Sahadeo Padhye, and Nour-eddine Rahmani</i>	
Quantum Key Distribution Protocol with Enhanced Intrusion Detection Using Sender Only Basis Announcement	413
<i>Tamal Deb, Jyotsna Kumar Mandal, and Mike Hinchey</i>	
Harnessing the Power of LSTM, ARIMA, and Dense Models for Accurate Temperature Prediction with Time Series Analysis	425
<i>Durjoy Chatterjee, Riyanka Das, Deepsubhra Guha Roy, Piyali Datta, and Dimitrios A. Karras</i>	
Frequent Pattern Tree Extension with Behavioral Characteristics for Profiling Purposes	436
<i>Goran Klepac</i>	

A NLP Framework for Automated Extraction of Lymph Node Metastases from Pathology Reports	445
<i>Debosmita Roy, Sweta Manna, and Sujoy Mistry</i>	
Exploratory Data Analysis of The ToN_IoT Dataset to Improve the Accuracy of Machine Learning Based Intrusion Detection Applications	456
<i>Kazım Kıvanç Eren and Kerem Küçük</i>	
The Interplay of Employee Efficiency and Financial Health in Indian Banking: Using Sustainability as a Key Factor	467
<i>Samiksha Kashyap, Bhakti Agarwal, Shailesh Rastogi, Asmita Dani, Rahul Sharma, and Narender Singh</i>	
Predictive Analysis of Chest X-rays Using NLP and Large Language Models with the Indiana University Dataset and Random Forest Classifier	478
<i>Azita Ramezani and Bahareh Sanabakhsh</i>	
Multi-Modal Framework for AI-Driven Healthcare Interventions	489
<i>Amlan Chatterjee and Francisco Martinez</i>	
Osteoporosis Detection Using Radiomic Features: An Effective Approach	499
<i>Akangkhi Borah, Lakhya Borah, Dhruba Kumar Bhattacharyya, Diganta Apurba Phukan, and Sanjeev Kumar Handique</i>	
IPLM: Intelligent PipeLined Model for Blended Learning System to Predict Academic Performance	512
<i>Ujjwal Biswas, Shirshak Ghatak, and Pradeepkumar Bhale</i>	
Evaluating Machine Learning Models for Diabetes Prediction: A Comparative Study Using Distinct Datasets	524
<i>Ananya Chaudhary and Arun Solanki</i>	
One Stage Parallel Algorithm for Huffman Codes Calculating	535
<i>Efremova Irina, Efremov Vladislav, and Malyshev Aleksandr</i>	
Author Index	543