2024 International Conference on Emerging Techniques in Computational Intelligence (ICETCI 2024)

Hyderabad, India 22-24 August 2024



IEEE Catalog Number:

ISBN:

CFP24Z80-POD 979-8-3503-8707-0

Copyright © 2024 by the Institute of Electrical and Electronics Engineers, Inc. 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:
 CFP24Z80-POD

 ISBN (Print-On-Demand):
 979-8-3503-8707-0

 ISBN (Online):
 979-8-3503-8706-3

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



Friday, August 23

Friday, August 23 4:15 - 6:15

Session 1: General Topics in Computational Intelligence - 1

Room: IT1 - First Floor, Wing 2 - CR 1

Chair: Deepak Gupta (National Institute of Technology, India)

Unstructured to Visualized: Transforming Data into Knowledge Graphs via Processing Pipeline.....1

Afifa Fatima, Prerana Jalapally and D. Naga Jyothi (Chaitanya Bharathi Institute of Technology, India)

Comparative Study of Different LLM's for Captioning Images to Help Blind People.....9

Mrunal Vijay Sondur (Vishwakarma Institute of Technology, Pune & NA, India)

Meta-Heuristic-Based Feature Selection for Stroke Prediction in Smart Healthcare System.....16

Tanisha Patel and Nilesh Kumar Jadav (Nirma University, India); Sudeep Tanwar (Nirma University & Institute of Technology, India); Deepak Garg (SR University, India)

Advancing Beach Litter Detection with Split and Federated Learning Collaborative Framework.....22

Aditya Patel, Ayushi Shah and Nilesh Kumar Jadav (Nirma University, India); Sudeep Tanwar (Nirma University & Institute of Technology, India); Deepak Garg (SR University, India)

Understanding Student Behavior and Learning Patterns Through Video Analytics: A Comprehensive Literature Review.....28

Jyoti Gadad (KLE Technological University, India); Vijayalakshmi M (K L E Technological University, India)

Exploring Students' Attitudes Towards Robotics Technology in STEM Education: A Machine Learning-Based Prediction Analysis.....34

Roheet Bhatnagar (Manipal University Jaipur, India); Mahmoud I. Abd El Aziz (Kafrelsheikh University, Egypt); Ahmed Elshewey (Suez University, Egypt); Zahraa Tarek (Mansoura University, Egypt); Sayed Kenawy (Delta Higher Institute for Engineering & Technology, Egypt); Ahmed Ghazy and Mahmoud Shams (Kafrelsheikh University, Egypt)

Session 2: General Topics in Computational Intelligence - 2

Room: IT1 - First Floor, Wing 2 - CR 2

Chair: Vinit K Gunjan (Engineering Institute & CMR Institute of Technology, India)

Wavelet-ANN Based Detection of Fault Location of 2-Bus Connected Power Transmission System.....42

S Chandra Shekar (NRI Institute of Technology, India); S. Jagadeesh (Sridevi Womens Engineering College, India); Shivashanker K (Vellore Institute of Technology, India); Vinayasagar Kommukuri (NIT Rourkela India, India)

Motion Parameter Estimation of Low Flying UAV Using Acoustic Sensor.....48

Rakeshwar Arumugaraj (Anna University, India); Saravanakumar A and Senthilkumar K (Professor, India)

A Study on Sustainable Tourism and Application of Sentiment Analysis in the Tourism Industry.....52

Chandra Prakash Gupta (Symbiosis Institute of Business Management Pune & Symbiosis International Deemed University Pune Maharashtra, India); Ravi Kumar V v (Symbiosis Institute of Business Management, Pune, India & Symbiosis International, Deemed University, Pune, India)

A Novel Low-Complexity Approach to Drowsiness Detection Using One Bit Bayes Classifier.....58

Naveen Jones, M. Surya Prakash and Anup Aprem (National Institute of Technology Calicut, India)

Content Retrieval in Information Centric Networks Using Machine Learning Models.....66

Nitul Dutta (SRM University-AP, India); Surya Beri Samantha (SRM AP, India)

Session 3: General Topics in Computational Intelligence - 3

Room: IT1 - First Floor, Wing 2 - CR 3

Chair: Rama Murthy Garimella (Mahindra Ecole Centrale, Hyderabad, India)

A Fuzzy Approach Towards the Measurement of Subject-Specific Cognitive Load During Mental Task Using Hemodynamic Response.....74

Subashis Karmakar (NIT Durgapur, India); Tandra Pal (National Institute of Technology Durgapur, India); Chiranjib Koley (NIT Durgapur, India)

Harmonizing Individual and Group Interests: A Strategy for Fostering Cooperation in Social Dilemma Games.....80

Garrison Greenwood (Portland State University, USA); Hussein A Abbass (University of New South Wales, Australia); Aya Hussein (University of Canberra, Australia)

GesturesSpeak: An IoT-Based Gesture to Speech Translator.....88

Sreenivasa Chakravarthi Sangapu, Manogna S. V. S and Aashish Reddy Shenagapally (Amrita School of Computing, Amrita Vishwa Vidyapeetham, Chennai, India); Sountharrajan S (Amrita School of Computing, Amrita Vishwa Vidhyapeetham, Chennai, India)

Integration of Voice Assistant with ChatGPT and DALL-E.....95

Aashish Joshua James (Mahindra University, India); Jahnavi Siripurapu (Mahindra University & 5th Bridge Data Technologies LLP, India); Neethu Dhwani Vangapalli and Yashwanth Reddy Chinnamallu (Mahindra University, India)

Session 4: Deep Learning - 1

Room: IT1 - First Floor, Wing 3 - CR 1

Chair: Mayuri Mehta (Sarvajanik University, India)

Enhanced Pneumonia Detection in Chest X-Rays Through Model Fusion..... 102

Nagoor Meeravali Shaik and Aazmi Irfan Mohammad (Amrita School of Computing, Amrita Vishwa Vidhyapeetham, India); Sreenivasa Chakravarthi Sangapu (Amrita School of Computing, Amrita Vishwa Vidyapeetham, Chennai, India); Sountharrajan S (Amrita School of Computing, Amrita Vishwa Vidhyapeetham, Chennai, India)

Traffic Congestion Management Using Deep Reinforcement Learning and Decentralized Routing.....110

Vamsi Krishna Tumuluru, Nirmitii N, Niharika Mall, Advaith M Rajeev and Athish Kathirvel Shanmugasundaram (PES University, India)

Smart Garbage Classification Using Cutting Edge Technology (VGG-16).....116

Rohith Musham, Srikar Sammeta, Sai Vardhan Reddy Pabbathi, Koushik Yarakala, Gayatri Mantri and Shashi Rekha Ravula (Malla Reddy College of Engineering and Technology - JNTUH, India)

Vision Based Lane Assistance System.....124

Monishaa S and Logaprakash M (Sri Ramakrishna Engineering College, India); Himajith Aithal and Saravanakumar

C Shanmugam (Bosch Global Software Technologies Pvt Ltd., India)

Stock Price Prediction Leveraging News Headlines.....131

Mudit Choudhary and Vikas Bajpai (The LNM Institute of Information Technology, India); Anukriti Bansal (IIT Delhi, India)

Deciphering the Unreplicable: Machine Learning Paradigms for Assessing and Manipulating Physical Unclonable Functions.....139

Kaipa Sri Charan (Koneru Lakshmahiah Education Foundation Hyderabad, Telangana, India); Pavan Kumar Settem (Koneru Lakshmaiah Education Foundation, India); Sathish Ande (Koneru Lakshmaiah Education Foundation, Hyderabad & Indian Institute of Technology Hyderabad, India); Aditya Japa (Queens University, United Kingdom (Great Britain))

Session 5: Deep Learning - 2

Room: IT1 - First Floor, Wing 3 - CR 2 Chair: Vijender Reddy (Isro, India)

A Reinforcement Learning Sampling Optimization Method Based on Training Value.....146

Baicheng Chen (Northeastern University & Arlinton University, China); Tianhan Gao (Northeastern University of China, China); Qingwei Mi (Northeastern University, China)

Enhancing Neurofuzzy Plasticity: A Fusion of LSTM and Artificial Neurogenesis.....150

Anirudh Sowrirajan, Sundari Avanthikaa Srinivasan and Pranav Srinivasan (SRMIST, India); Prasanna Devi S (SRM Institute of Science and Technology, India)

Neuroimaging-Based Age Prediction with Genetic Algorithm for Feature Optimization.....155

Michael G (Saveetha School of Engineering Simats Engineering Saveetha University, India); V Sheeja Kumari (SIMATS School of Engineering & SIMATS University, Chennai, India); Jangam Subbarayudu (Saveetha School of Engineering, SIMATS Engineering, Saveetha University, India)

Nuchal Translucency Assessment in Prenatal Screening: An Attention-Based U-Net Approach.....161

Babu Chinta (Center for Medical Electronics & Computing, Ramaiah Institute of Technology, Bengaluru, India); Natarajan Sriraam (Dept of Medical Electronics Engineering, Ramaiah Institute of Technology, Bengaluru, India); S Suresh and S Sudharshan (Mediscans Pvt Ltd, India)

Deep Learning Implementation on SAR Data for Built-Up Extraction for Hyderabad City.....167

Sampath Kumar P (National Remote Sensing Centre & ISRO, India); Reedhi Shukla (National Remote Sensing Centre, India); Satish Jayanthi and Saiveena Suresh (NRSC, India)

Real-Time Detection of Speech Based Affective Behaviour Using Deep Learning.....172

Yash Dev Parashar and Satyajit Pangaonkar (Avantika University, India); Surendra Rahamatkar (Amity University Raipur Chhattisgarh India, India)

Saturday, August 24

Saturday, August 24 9:00 - 10:00

Keynote - 4

Room: IT1 - First Floor, Wing 2 - CR 1

Quaternion Neural Networks as a Polarization-Aware Adaptive Signal-Processing Framework.....178

Akira Hirose (The University of Tokyo, Japan)

Saturday, August 24 10:15 - 10:45

Research Colloquium Presentations

Room: IT1 - First Floor, Wing 2 - CR 1

Enhancing Student Model via Knowledge Transfer with Prior-Informed Constraints from a Teacher.....179

Abhiroop Chatterjee, Susmita Ghosh and Namita Jain (Jadavpur University, India)

Saturday, August 24 10:45 - 12:45

Session 10: Deep Learning - 3

Room: IT1 - First Floor, Wing 3 - CR 2

Chair: Arun Agarwal (Siksha O Anusandhan Deemed to Be University, India)

Enhancing Image Super-Resolution with GANs Featuring Enhanced Deep Super-Resolution and Attention Mechanisms.....185

Aditi Katiyar and Aditya Kumar Gannavarapu (Vellore Institute of Technology, India); Kannan Kannan (Vit, India)

Improving Brain Tumor Detection Efficiency with Convolutional Neural Network.....192

Md Abdul Based, Prof (Dhaka International University, Bangladesh)

AutoCoach: An Automated Playing Eleven Selection Framework in Cricket..... 198

Pulkit Sharma (Queen Mary University London, United Kingdom (Great Britain)); Bilal Hassan (London Metropolitan University, United Kingdom (Great Britain)); Muhammad Farooq Wasiq (Air University Islamabad, Pakistan)

A Framework for Visualization of Streaming 3D Point Cloud....204

Gollapudi Ramesh Chandra (VNR Vignanan Jyothi Institute of Engineering and Technology, India); Ashritha Katakam (Vallurupalli Nageswara Rao Vignana Jyothi Institute of Engineering and Technology, India); Bhanu Teja Chapala (VNR Vignana Jyothi Institute of Engineering and Technology, India); Shaik Jnaved and Poojitha Chindam (Vallurupalli Nageswara Rao Vignana Jyothi Institute of Engineering and Technology, India)

Exploring Network Security Metrics and Enhancing the Secure Computing for Cloud Through Honeypot.....210

Pallavi Joshi (Amrita Vishwa Vidyapeetham, India); Anusha B (Amrita Vishwa Vidyapeetham, Mysuru, India); Kruthi V (Amrita Vishwa Vidyapeetham, India)

Session 11: SS 1: Computational Intelligence in Disease Diagnosis

Room: IT1 - First Floor, Wing 3 - CR 3

Chair: Manjusree P (National Remote Sensing Centre, India)

A Survey on Multi-Classification of Pulmonary Diseases Using Image Processing and Deep Learning Algorithms.....215

Uma Maheswari V, Niveditha Reddy Mandala and Roopika Ponnur (Chaitanya Bharathi Institute of Technology, India)

Prediction Model for Suicidal Behavior Disorder Risk Analysis by Correlating Cyber and Real World Data.....223

Gone Neelakantam (Mahindra University, India)

A Novel Attention Informed Voting Ensemble Framework for Retinal Disease Classification.....230

Jaswanth Nidamanuri (CSE, School of Technology, Woxsen University, Hyderabad, India); Aditi Baggu (Bachelor's of Technology, Woxsen University, India); Venkata Abhiram Polisetti (School of Technology, Woxsen University, India)

An Analysis of Clinical and Sociodemographic Data on Congenital Syphilis Using Gaussian Naive Bayes and XAI Modeling.....238

Nishat Nayla (BRAC University, Bangladesh)

Advanced Threat Protection for File Storage.....244

Neelakantan Puligundla (VNR Vignana Jyothi Institute of Engineering & Technology, India)

Session 6: SS8 on Deep Learning Modes and Applications in Computer Vision

Room: IT1 - First Floor, Wing 2 - CR 1 Chair: Hemant Rathore (BITS Pilani, India)

Intelligent Connected Vehicle Intrusion Detection and Mitigation: An Analysis of Explainable Al.....252

Ravula Vishnukumar (Vellore Institute of Technology,, Vellore, India); Adla Padma (Vellore Institute of Technology, Vellore, India); Mangayarkarasi R (Vellore Institute of Technology, India)

License Plate Recognition and IOT Based Parking System.....257

Arul Vivek (Thiagarajar College of Engineering & Anna University, India); Raman Subramanian Shriram (Thiagarajar College of Engineering, India & Anna University, India); Karthikeyan P (Thiagarajar College Of Engineering & Anna University, India); Harikrishna Pydi (Thiagarajar College of Engineering & Anna University, India)

High-Level Synthesis Based Hardware Accelerator for LSTM Neural Network.....263

Shabarinath B B, Mr. (VNR Vignana Jyothi Institute of Engineering and Technology, India); Pullakandam Muralidhar (NIT Warangal, India); Aishwarya Adike, Adithya Vardhan Kankari and Charan Teja Ramanakulam (VNRVJIET, India)

Fabric Defect Detection Systems and Methods in India: A Comprehensive Review.....269

Deepti Patil (Sharnbasva University, India)

Session 7: General Topics in Computational Intelligence - 4

Room: IT1 - First Floor, Wing 2 - CR 2

Chair: Atul Negi (University of Hyderabad, India)

Performance Analysis of a Scalable Federated Learning-Based Agricultural Network.....273

Shatanik Chakraborty (Meghnad Saha Institute of Technology Kolkata India, India); Maharnab Sarkar (Engineering and Textile Technology Berhampore India, India); Avijit Gayen (Indian Institute of Technology, Patna, India); Angshuman Jana and Nilotpal Chakraborty (IIIT Guwahati, India)

Frequency Domain Parameters of a Two-Area Automatic Generation Control.....281

Hussain Shaik (JNTU Kakinada & Vidya Jyothi Institute of Technololy, India)

Self-Organizing Map for Automated Quality Assessment in Algorithmic Music Computation.....288

Prafulla Kalapatapu, Ventrapragada Sai Srikar, Aakarsh Reddy, Vineeth Mallavarapu, Bhargav Karra and Arya

Kumar Bhattacharya (Mahindra University, India)

Music Recommendation System Using Facial Detection Based Emotion Analysis.....296

Manvitha Sri Guthula and Monali Bordoloi (VIT-AP University, India)

Multi Agent System Based Control for Energy Management of Hybrid Microgrid System.....302

Praveen kumar reddy K (Jawaharlal Nehru Technological University Anantapur, India)

Neural Architecture Search Applied to Autoencoders Trained on Noisy Industrial Data: Single and Multi-Objective Investigations.....309

Aditya Sai Ellendula (Mahindra University, India); Aurelien Anand (Ecole Centrale de Lyon, France); Arya Kumar Bhattacharya (Mahindra University, India)

Session 8: General Topics in Computational Intelligence - 5

Room: IT1 - First Floor, Wing 2 - CR 3

Chair: Saikumar Tara (CMR Technical Campus, Hyderabad, India)

AcuLearn - Precision Based Learning Analytics Platform Using Machine Learning Algorithms.....317

Poluri Manaswini (Amrita Vishwa Vidyapeetham & Amrita University, India)

Motor-Imagery Signal Preprocessing Using the SMOTE Technique and Neuromuscular Disorder Detection.....324

Sreedevi Ch and Suresh Annamalai (SRM Institute of Technology, India)

AstroFusion: A GAN-Augmented Approach for Exoplanet Detection.....330

Gopirajan PV (SRM Institute of Science and Technology & School of Computing, India); Aakash Suresh (SRM Institute of Science and Technology, Kattankulathur, Chennai, India)

Session 9: General Topics in Computational Intelligence - 6

Room: IT1 - First Floor, Wing 3 - CR 1

Chair: Debopam Chakraborty (Mahindra University, India)

Formulating Explainable UI/UX for Bank ATM and Analytic Performance of HCI.....338

Jay R. Bhatnagar (GEU, India); Ravi Prakash Iyer (IIT Tirupati, India); Shlok Agarwal (GEU, India)

Analyzing Computer Virus Propagation: Integrating Monte Carlo Simulations with Delay Differential Equation Models.....345

Ananya Hazarika, Abhirath Sangala, Raghu Neelisetti and Rakhee Basu (Mahindra University, India)

A Novel Direct Formula Based Technique for Predicting the Class Label of New Unseen Test Tuple Without Learning.....353

D Mabuni (Dravidian University, Kuppam, India); Aquter S Babu (Dravidian University, India); Sudarsana C Reddy (Chadalawada Ramanamma Engineering College, Tirupati, India)

Saturday, August 24 3:00 - 4:20

Session 12: Deep Learning - 4

Room: IT1 - First Floor, Wing 2 - CR 1

Chair: Deepak Gupta (National Institute of Technology, India)

Efficient Lightweight Blockchain-Based Authentication and Intrusion Detection System for Secure Message Transfer in VANETs.....362

Rajesh Ganesan (Anna University, India); Mercilin Raajini X (Associate Professor, India); Meyyappan S, Rajapriya R, Rozen Berg D and Logeshwaran K (Anna University, India)

Wireless Sensor Network-Driven IoT Solution for Advanced Borewell Rescue Robotics.....368

Meera V, Sharon Nesa Mercia David, Padmapriya J and Murugavalli S (Panimalar Engineering College Chennai City Campus, India)

Session 13: Deep Learning - 5

Room: IT1 - First Floor, Wing 2 - CR 2

Chair: Arya Kumar Bhattacharya (Mahindra University, India)

Fruit Classification Based on Freshness.....373

M Mallegowda (Ms Ramaiah Institute of Technology, India); Sanskar R G (M S Ramaiah Institute of Technology, India); Vishveshwara N (M S Ramaiah Institute of Technology Bangalore, India); Swafna G A (MS Ramaiah Institute of Technology Bangalore, India); Vivek J (MS Ramaiah Institute of Technology, India); Anita Kanavalli (M S Ramaiah Institute of Technology, India)

Exploration of Inaccessible Fibrins in SEM of RBC Using Fractal Based Modified Segregation Scoring Approach.....382Parvatham Vijay (Sri Sairam Institute of Technology, Chennai, India)

Performance Evaluation of Coherent & Non-Coherent MIMO Radar for Target Detection.....387

Atul Khuntia, Kumar Aditya, Divya Dharshini R and Mythri R (Acharya Institute of Technology, India); Devasis Pradhan (Acarya Institute of Technology & Acharya Institute of Technology, Bangalore, India); Arun Agarwal (Siksha O Anusandhan Deemed to Be University, India)

Session 14: SS7: Memristor based Neural Networks

Room: IT1 - First Floor, Wing 2 - CR 3

Chair: Niranjan Raj (BITS Pilani, Hyderabad, India)

Efficient Illumination: Arduino-Based Street Light Automation for Energy Savings.....397

Dhairya A Mehra, Rutu B Bhanderi, Anushka Hegade and Chandan Kumar Choubey (Symbiosis International Deemed University, India)

A Comparative Analysis of Deep Learning Algorithms for Intrusion Detection in IoT 402

Gaurav Sushant Cherukuri, Lakshmi Ajay Veeramraju and Rashmi Sahay (The ICFAI Foundation for Higher Education, Hyderabad, India)

A Survey on Image Segmentation for Applications and Performance of Deep Convolution Neural Network Architecture.....408

Bhargavi Kandadai (FST-ICFAI, India); Ch V Phani Krishna (Teegala Krishna Reddy Engineering College, India)

Restaurant Reviews Sentiment Analysis Using Machine Learning Approach.....414

Burra Harini (IcfaiTech, IFHE, Hyderabad, India); Pallavi Mishra Accepted (The ICFAI Foundation for Higher Education, Hyderabad, India)

Saturday, August 24 3:00 - 4:40

Session 15: Deep Learning - 6

Room: IT1 - First Floor, Wing 3 - CR 1

Chair: Saikumar Tara (CMR Technical Campus, Hyderabad, India)

Automated Hardware Security Evaluation Framework Using PSO and CNN for Optimizing Key Gate Placement and Enhanced Security Analysis.....418

Dhanam B (January 2023, India); Marichamy P (Jan 2023, India)

Early Detection of Black Fungus Using Deep Learning Models for Efficient Medical Diagnosis.....426

Roheet Bhatnagar (Manipal University Jaipur, India); Esraa Hassan (Kafrelsheikh University, Egypt); Abeer Saber (Damietta University, Egypt); Sayed Kenawy (Delta Higher Institute for Engineering & Technology, Egypt); Mahmoud Shams (Kafrelsheikh University, Egypt)

A Deep Learning Dive into Predicting Pneumonia Disease Using ANN and CNN Techniques.....432

Madala Chaitanya Prabhu (Kalasaligam University, India); Nagaraj P, C Jahnavi, B Meghana Reddy, C Bharath Kumar and N Akhilesh (Kalasalingam Academy of Research and Education, India)

Session 16: Deep Learning - 7

Room: IT1 - First Floor, Wing 3 - CR 2

Chair: Nilotpal Chakraborty (Indian Institute of Information Technology, Guwahati, India)

Autonomous Vehicle Lane Following Network Based on Multimodal Sensor Fusion and LiDAR Reconstruction in Extreme Lighting and Snowing Environments.....439

Padmapriya J, Meera V and Murugavalli S (Panimalar Engineering College Chennai City Campus, India); L Karthikeyan (Panimalar Engineering College, India)

Brain Tumor Detection Using Deep Learning and VGG-16 Model 445

Saksham Sonik, Ritik Kumar Sahoo, Ayon Kumar Das, Aditya Kumar Sharma, Deepak Kumar Rakesh and Bichitrananda Behera (CV Raman Global University, India); Rakesh Ranjan Kumar (Indian Institute of Technology (ISM), Dhanbad, India)

Multimodal MRI Analysis for Schizophrenia Classification Using Machine Learning Algorithm.....451

Tamilarasi S (Vellore Institute of Technology Chennai, India); Vijayarajan Rajangam (Vellore Institute of Technology Chennai, India)

Enhanced Multi-Class Weather Image Classification Using Data Augmentation and Dynamic Learning on Pre-Trained Deep Neural Net.....459

Dibyendu Chattoraj, Abhiroop Chatterjee and Susmita Ghosh (Jadavpur University, India); Ashish Ghosh (ISI Kolkata, India); Emmett Ientilucci (Associate Professor, USA)

Saturday, August 24 3:00 - 4:20

Session 17: Computational Sequence Modelling

Room: IT1 - First Floor, Wing 3 - CR 3

Chair: Atul Negi (University of Hyderabad, India)

A Data-Driven Analytical Framework for Predicting Fuel Consumption in Shipping Industry.....465

Varad Acharya, Aarav Shah and Nilesh Kumar Jadav (Nirma University, India); Sudeep Tanwar (Nirma University & Institute of Technology, India); Deepak Garg (SR University, India)

Navigating Financial Markets: Exploring Advanced Neural Networks for Stock Price Prediction.....471

Hitaish K G (Reva University, India); Vani Krishnaswamy (Reva Institute of Technology and Management, India); Vishnu M and Mahima B (Reva University, India)

RAKTAMITRA: An Alert Centric Blood Donation App.....477

Mukesh Chinta (Velagapudi Ramakrishna Siddhartha Engineering College, India); Inti Alekhya (Velagapudi Ramakrishna Siddhartha College', India); Likitha Maddela (Velagapudi Ramakrishna Siddhartha Engineering College, India)

Digital Twin of a 5-Bar Parallel Manipulator with Singularity Avoidance.....483

Rampratheep Reddy M., Nynaru Bhargav, Mudassir Ahmed and Yarra Devasish (SASTRA Deemed University, India); Anjan Dash (SASTRA University, India)