2023 3rd International Conference on Pervasive Computing and **Social Networking (ICPCSN 2023)**

Salem, India 19-20 June 2023

Pages 1-598



IEEE Catalog Number: CFP23EZ5-POD ISBN:

979-8-3503-2285-9

Copyright © 2023 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:
 CFP23EZ5-POD

 ISBN (Print-On-Demand):
 979-8-3503-2285-9

 ISBN (Online):
 979-8-3503-2284-2

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



2023 3rd International Conference on Pervasive Computing and Social Networking (ICPCSN) ICPCSN 2023

Table of Contents

Message from the Chairman	xxxvii
Message from the Director	
Message from the Conference Chair	xxxix
Pervasive Computing	
Convolutional Neural Network Algorithm for Lung Cancer Identification from X-Ray Images _ A. Sivasangari (Sathyabama Institute of Science and Technology), Salman Khan (Sathyabama Institute of Science and Technology), D Deepa (Sathyabama Institute of Science and Technology), J. Jabez (Sathyabama Institute of Science and Technology), Anandhi T (Sathyabama Institute of Science and Technology), and Vignesh R (Sathyabama Institute of Science and Technology)	1
Automatic Toll Collection using Vehicle Number Recognition System P. Sai Kiran (Prasad V Potluri Siddhartha Institute of Technology), Yalanati Ayyappa (Prasad V Potluri Siddhartha Institute of Technology), Maddila Kavya sree (Prasad V Potluri Siddhartha Institute of Technology), Jaswanth Jampani (Prasad V Potluri Siddhartha Institute of Technology), Mounisha Raavi (Prasad V Potluri Siddhartha Institute of Technology), and Karthik Aluru (Prasad V Potluri Siddhartha Institute of Technology)	5
Violence Prediction System using Bi-LSTM	11
Lung Cancer Screening Using Computer-aided Detection and Image Processing Techniques Anil Boddupalli (Koneru Lakshmaiah Education Foundation), Laxman Rayala (Koneru Lakshmaiah Education Foundation), Sai Sandeep Lingareddy (Koneru Lakshmaiah Education Foundation), Yetra Mohan Sai Saran Reddy (Koneru Lakshmaiah Education Foundation), Yamuna Devi M M (Koneru Lakshmaiah Education Foundation), and A. Veeraswamy (Koneru Lakshmaiah Education Foundation)	16

Safety Helmet Detection using YOLO V8	22
Krunal Patel (Sigma University), Vrajesh Patel (Sigma University), Vikrant Prajapati (Sigma University), Darshak Chauhan (Sigma University), Adil Haji (Sigma University), and Sheshang Degadwala	
(Sigma University)	
Missing Children Face Identification Using Deep Learning Algorithm	_ 27
A Review of Artificial Intelligence in Medical Prescription Analysis Mayur Agrawal (Ajeenkya DY Patil University), Vishwajeet Mishra (Ajeenkya DY Patil University), Hanesh Sunil Jogani (Ajeenkya DY Patil University), Prerna Kashyap (Ajeenkya DY Patil University), and Raj Gaurav Mishra (Ajeenkya DY Patil University)	_35
Detection of Brain Tumor from MRI Images using VGG-16 CNN Model with	4.4
Transfer Learning Bhanu Pratap Singh Rathore (SRM Institute of Science and Technology), Rutul Dave (SRM Institute of Science and Technology), Dhanasekaran K (SRM Institute of Science and Technology), and Priyadarsini K (SRM Institute of Science and Technology)	44
Multimodal Approach for Detecting Depression using Physiological and Behavioural Data Ankita Kokkera (SRM Institute of Science and Technology), Narra Varsha (SRM Institute of Science and Technology), and A. Vijay Vasanth (SRM Institute of Science and Technology)	_ 53
Cyber Bullying and Toxicity Detection using Machine Learning Ranjana Jadhav (Vishwakarma Institute of Technology), Naman Agarwal (Vishwakarma Institute of Technology), Srushti Shevate (Vishwakarma Institute of Technology), Chinmayee Sawakare (Vishwakarma Institute of Technology), Piyush Parakh (Vishwakarma Institute of Technology), and Snehankit Khandare (Vishwakarma Institute of Technology)	_ 66
Beyond Face Value: Identifying Irony and Sarcasm in Short Texts Through Multiclass Classification Techniques Avaneesh Jai Damaraju (Manipal Institute of Technology) and Divya Rao (Manipal Institute of Technology)	_ 74
Analysis of COVID-19 using Machine Learning & Data Science Technologies Bogasamudram Sravani (Koneru Lakshmaiah Education Foundation), Gumpena Hema Sri Venkata Sai (Koneru Lakshmaiah Education Foundation), Vytla Vyshnavi (Koneru Lakshmaiah Education Foundation), Talluri Sandeep (Koneru Lakshmaiah Education Foundation), and M. M. Yamuna Devi (Koneru Lakshmaiah Education Foundation)	_ 80
Bio-inspired Optimization with Transfer Learning based Crowd Density Detection on Sparse Environment A. Poongodi (Vels Institute of Science, Technology & Advanced Studies), N. Kopperundevi (Vellore Institute of Technology), S. Poorani (Kongu Engineering College), Mohit Tiwari (Bharati	_ 86
Vidyapeeth s College of Engineering), B. Srinivasa Rao (Gokaraju Rangaraju Institute of Engineering & Technology), and N. Abilash (Annai Vailankanni College of Engineering)	01
Resume Classification using Support Vector Machine	_ 91

A Stock Market Trends Analysis of Google using Convolutional Neural Network based	
Techniques	97
Aneesh Pal (Graphic Era Hill University), Indrajeet Kumar (Graphic Era	
Hill University), Chandradeep Bhatt (Graphic Era Deemed to be University), and Noor Mohd (Graphic Era Deemed to be University)	
	400
YogMaster: Detection and Correction of Yoga Postures using Augmented Reality	103
Disease Prediction using Random Forest Classifier by Machine Learning Application Sumit Singh (Graphic Era (Deemed to Be University)), Noor Mohd (Graphic Era (Deemed to Be University)), Tanmay Shukla (Graphic Era (Deemed to Be University)), Jaya Sharma (Graphic Era (Deemed to Be University)), and Aarushi Chopra (Graphic Era (Deemed to Be University))	109
Exoplanet Detection using Feature Engineering with Ensemble Learning	116
G. Venkata Sai Rakesh (VIT-AP University), M. Jahnavi Bhuvana	
Chandrika (VIT-AP University), Ch. Venkata Rami Reddy (VIT-AP	
University), and Muvva Suneetha (Independent Researcher)	
Workout Prediction using Machine Learning Ankita Yadav (St John college of engineering and management), Mukund Choudhary (St john college of engineering and management), Poorvee Gautam (St john college of engineering and management), Kimaya Sankhe (St john college of engineering and management), and Ajay Sirsat (St john college of engineering and management)	123
A Study on Working and Applications of Sequential Deep Learning Models	127
S.B. Swathi (Kakatiya Institute of Technology and Science), SaiNikhil	
Juluri (Kakatiya Institute of Technology and Science), Pooja Madhukar	
(Kakatiya Institute of Technology and Science), Akshaya Kandhagatla	
(Kakatiya Institute of Technology and Science), and Soumya Chavan	
(Kakatiya Institute of Technology and Science)	
An ANPR-based Automatic Toll Tax Collection System using Camera	133
B VeerasekharReddy (MLR Institute of Technology), Venkata Nagaraju	
Thatha (MLR Institute of Technology), A Maanasa (MLR Institute of Technology), Sahithi Sindhu Gadupudi (MLR Institute of Technology),	
Sai Kumar Japala (MLR Institute of Technology), and L Harshini Goud	
(MLR Institute of Technology)	
Stock Market Prediction using Machine Learning Algorithm	141
Stinidhi. R (Easwari Engineering College), Siddharth Sarathy. S	141
(Easwari Engineering College), and Ponraj. A (Easwari Engineering College)	
Menstrual Cycle Tracking using Deep Learning	146
Shikha Suman (Sathyabama Institute of Science and Technology),	
Somdatta Mukherjee (Sathyabama Institute of Science and Technology),	
Mercy Paul Selvan (Sathyabama Institute of Science and Technology),	
Viji Amtha Mary (Sathyabama Institute of Science and Technology), S	
Jancy (Sathyabama Institute of Science and Technology), and S Prayla	
Shyry (Sathyabama Institute of Science and Technology)	

Exploratory Data Analysis: An Analysis on Geotagged Twitter COVID Data	_ 153
Sujitha Juliet (Karunya Institute of Technology and Sciences)	
An Overview on Breast Cancer Detection & Classification Methods using Machine Lea Techniques	rning _ 160
Rishabh K Raj (Muthoot Institute of Technology and Science), Rishabh K Raj (Muthoot Institute of Technology and Science), Fathima Althaf (Muthoot Institute of Technology and Science), and Dhanya Sudarsan (Muthoot Institute of Technology and Science)	
Feature Extraction Techniques in Sentiment Analysis using Deep Learning: A Review Anita Diliprao Gawali (Savitribai Phule Pune University) and Baisa Laxman Gunjal (Savitribai Phule Pune University)	_ 168
An Intelligent Chatbot Haggling with Ensemble ML Model	_ 174
TOPSIS-based Feature Selection for Text Classification Avinash Kumar (National Institute of Technology) and Tirath Prasad Sahu (National Institute of Technology)	_ 179
Identification of Consumer Buying Patterns using KNN in E-Commerce Applications Wasim Yasin (CHRIST(Deemed to be University)), Karthikeyan Harimoorthy (CHRIST(Deemed to be University)), and Divya Vetriveeran (CHRIST(Deemed to be University))	_ 187
Non-invasive Submerged Pipeline Inspection through Advanced Image Analysis and Deep Learning Algorithms for Quantitative Deterioration Assessment A. Inbavalli (IFET College of Engineering), B. Shanmugasundaram (IFET College of Engineering), and S. Chozhavendan (IFET College of Engineering)	_ 193
A Machine Learning Approach to Predict NICU units in Hospital by Developing Smart e-Healthcare System Santosh Das (Omdayal Group of Instituions), Ritam Dutta (Poornima University), Shenbaga Bharatha Priya. A (Anna University), Bhaskar Roy (Asansol Engineering College), and Papri Ghosh (Narula Institute of Technology)	_ 199
Music Genre Classification using LSTM and CNN Samuel Wycliffe J (Sri Krishna College of Engineering and Technology), Ponnaiah Karthik R M (Sri Krishna College of Engineering and Technology), Praveen Kanth K (Sri Krishna College of Engineering and Technology), and Prasanna J (Sri Krishna College of Engineering and Technology)	_ 205
Verifcation of Academic Records using Hyperledger Fabric and IPFS Shaik Khaleelullah (Vignan Institute of Technology and Science), Sai Teja Vangapalli (Vignan Institute of Technology and Science), Malavika Gaddam (Vignan Institute of Technology and Science), Vitesh Sai Hanumakonda (Vignan Institute of Technology and Science), and Uday Kiran Goud Gangapuram (Vignan Institute of Technology and Science)	_ 210

Left Ventricle Segmentation in Cardiac MR Images using Deep Neural Network Models S Ramya (Saveetha Engineering College), S Praveen Kumar (Saveetha Engineering College), Michael Magizhan S.R (Saveetha Engineering College), G Dinesh Ram (Saveetha Engineering College), G Lingaraja (Saveetha Engineering College), and T Aravind (Saveetha Engineering College)	_ 218
Detection of Hypertrophic Cardiomyopathy from Echocardiography: A Survey of Current Approaches Abdullah A Muhamed (Amrita Vishwa Vidyapeetham), Jivthesh M R (Amrita Vishwa Vidyapeetham), Gaushik M R (Amrita Vishwa Vidyapeetham), Nagesh Subbanna (Amrita Vishwa Vidyapeetham), and Hisham Ahamed (Amrita Institute of Medical Sciences and Research Center)	_ 224
A Comparative Analysis of Explainable AI Techniques for Enhanced Model Interpretability Swathi.Y (CMR Institute of Technology) and Manoj Challa (Gopalan College of Engineering and Management)	_ 229
Predicting Stock Prices with Machine Learning and Virtual Stock Market Game Himanshu Mishra (Vivekanand Education Society s Institute of Technology), Pushkar Mavale (Vivekanand Education Society s Institute of Technology), Rohit Karalkar (Vivekanand Education Society s Institute of Technology), Anandkumar Yadav (Vivekanand Education Society s Institute of Technology), and Jayashree Hajgude (Vivekanand Education Society s Institute of Technology)	_ 235
Artificial Intelligence in Current Education: Roles, Applications & Challenges	_ 241
PREDICARE: Machine Learning based Disease Diagnosis System Yugchhaya Galphat (Vivekanand Education Society s Institute of Technology), Laveena Kithani (Vivekanand Education Society s Institute of Technology), Disha Raghani (Vivekanand Education Society s Institute of Technology), Chirag Dayaramani (Vivekanand Education Society s Institute of Technology), and Yash Kriplani (Vivekanand Education Society s Institute of Technology)	_ 245
Improving Performance of VGG19 Model using Dual Input Block for Skin Disease Classification Sanjeevi G G (K.S.Rangasamy College of Technology), Shailesh Kanna R (K.S.Rangasamy College of Technology), Tharun Raj T R (K.S.Rangasamy College of Technology), and Malarkhodi S (K.S.Rangasamy College of Technology)	_ 251
MRI based Automatic Brain Stroke Detection using CNN Models Improved with Model Scaling Puneet Kumar Yadav (UIE-CSE Chandigarh University), Sugan Patel (UIE-CSE Chandigarh University), Shuvendu Das (UIE-CSE Chandigarh University), Shalini Singh (UIE-CSE Chandigarh University), and Ashish Sharma (Galgotias University)	_ 257
Microcontroller based Automatic Saree Folding Machine S Usha (Kongu Engineering College), M Karthik (Kongu Engineering College), S Sanjay Kumar (Kongu Engineering College), P Sakthi Viswanathan (Kongu Engineering College), S Sabariabishek (Kongu Engineering College), and M Manodeepan (Kongu Engineering College)	_ 260

Detection of Insider Threats using Deep Learning Anju A (KCG College of Technology), Nithya Kalyani M (KCG College of Technology), Shalini K (KCG College of Technology), Haritha Ravikumar (KCG College of Technology), Saranya P (KCG College of Technology), and M Krishnamurthy (KCG College of Technology)	264
Audio-Music Fingerprinting Recognition Girisha G S (Dayananda Sagar University), Chinmaya Murthy (Dayananda Sagar University), Chirayu S M (Dayananda Sagar University), Dayanand Kavalli (Dayananda Sagar University), and Divya J (Dayananda Sagar University)	_ 270
Structural Health Monitoring using Machine Learning Techniques Monisha. P (Sri Ramakrishna Engineering College), A. ArunRaja (Christ University (deemed to be university)), and J. Judeson Antony Kovilpillai (Sri Ramakrishna Engineering)	_ 275
Artificial Intelligence Enhanced Content Management Systems: Integration, Considerations, and Useful Examples Ayush.R. Yadav (University of Mumbai), Snehal.S. Yadav (University of Mumbai), and Supriya Kamoji (University of Mumbai)	_ 283
An Identification and Categorization of Plastic Material using Deep Learning Approach Yedlapalli Kasi Viswanadham (Seshadri Rao Gudlavalleru Engineering College), Ravipati Sandhya Rani (Seshadri Rao Gudlavalleru Engineering College), Varanasi Madhu Sri Lakshmi Sudha Mai (Seshadri Rao Gudlavalleru Engineering College), Vaka Naga Vamsi Krishna (Seshadri Rao Gudlavalleru Engineering College), and Yaragani Veera Vamsi (Seshadri Rao Gudlavalleru Engineering College)	_ 289
A Hierarchical Clustering Random Forest Model Approach to Diagnose the Breast Cancer Diseases Polaki Sujatha (Seshadri Rao Gudlavalleru Engineering College), Chaitanya Mutyam (Seshadri Rao Gudlavalleru Engineering College), Raviteja Nekkanti (Seshadri Rao Gudlavalleru Engineering College), Nitin Kanakavalli (Seshadri Rao Gudlavalleru Engineering College), and Basavaiah Soma (Seshadri Rao Gudlavalleru Engineering College) An Image Encryption Model Using Hyper Chaotic Map Dependent Grey-intelligent	_ 295
Optimization Parvathraj K M M (Srinivas Institute of Technology) and Anoop B K (Srinivas Institute of Technology)	301
Parallel Computing and Deep Learning-based Techniques for Colorization of Visual Media	307
Automatic Detection and Classification of Wild Animal Species using YOLO Models Rajasekaran Thangaraj (KPR Institute of Engineering and Technology), Charly Jerome J (KPR Institute of Engineering and Technology), Sanjith M (KPR Institute of Engineering and Technology), Rithick Saran K (KPR Institute of Engineering and Technology), Sudev Sasikumar (KPR Institute of Engineering and Technology), and Vijayakumar S (KPR Institute of Engineering and Technology)	315

FMCG Market Analysis for Wholesalers and Retailers using Machine Learning C. Shyamala Kumari (Vel Tech University), B S V Vidya Deepu (Vel Tech University), Dheeraj G (Vel Tech University), and Vinay Kumar Sai Surampudi (Vel Tech University)	323
Optimization Technique to Reduce Resource Utilization of Software Key Loggers using PSoftware Sharma (Chandigarh University) and Muskaan Rana (Chandigarh University)	O _329
Automation of Skin Cancer Detection with Image Processing using Efficient and Light CNN Models Ritwika Pal (Kalinga Institute of Industrial Technology) and Santwana	htweight 335
Sagnika (Kalinga Institute of Industrial Technology)	
Image Captioning - A Deep Learning Approach using CNN and LSTM Network Preeti Voditel (Shri Ramdeobaba College of Engineering and Management), Aparna Gurjar (Shri Ramdeobaba College of Engineering and Management), Aakansha Pandey (Shri Ramdeobaba College of Engineering and Management), Akrati Jain (Shri Ramdeobaba College of Engineering and Management), Nandita Sharma (Shri Ramdeobaba College of Engineering and Management), and Nisha Dubey (Shri Ramdeobaba College of Engineering and Management)	343
Framework for Assessment of Bitcoin Price Prediction using Ensembling Machine Learnir Approach	ng 349
Amisha Shimpi (Sanjivani College of Engineering), Rohan Gambhir (Sanjivani College of Engineering), Abhishek Diwate (Sanjivani College of Engineering), Sahil Udawant (Sanjivani College of Engineering), N.Y. Siddiqui (Sanjivani College of Engineering), and P. William (Sanjivani College of Engineering)	547
Face Detection and Adaptive Zooming for Intelligent Lecturer Tracking System Rajesh Kannan Megalingam (Amrita Vishwa Vidyapeetham), Gowtham G Menon (Amrita Vishwa Vidyapeetham), Karthik K (Amrita Vishwa Vidyapeetham), and Swathi B (Amrita Vishwa Vidyapeetham)	354
Waysides Inspection using Wayside Processing Imaging and Deep Learning R. Thillaikkarasi (Salem College of Engineering and Technology), M. Mohamed Yaseen (KCG College of Technology), R. Rameshbabu (VSB Engineering College), Radha Prabhakaran (KCG College of Technology), R. Kesavan (Saveetha Institute of Medical and Technical Science), and Jose Anand A (KCG College of Technology)	359
Hybrid Approach for the Classification and Detection of Brain Tumors	366
Analysis of Communication Protocols with Machine Learning for Smart Cities E. Sangeetha (Kalasalingam Academy of Research and Education (Deemed to be University)) and J. Deny (Kalasalingam Academy of Research and Education (Deemed to be University))	373
Integrating AI and Computer Vision for Effective Foreign Object Detection on Airport	202
Runways	382

Vehicle Theft Detection using Neural Pattern Recognition J. Jane Rubel Angelina (Kalasalingam Academy Of Research And Education), S.J Subhashini (SRM Madurai College for Engineering and Technology), Anil Kumar Rapuri (Kalasalingam Academy Of Research And Education), Vennela Ravva (Kalasalingam Academy Of Research And Education), Raghavendra Rasala (Kalasalingam Academy Of Research And Education), and Sai Deepak Rayadurgam (Kalasalingam Academy Of Research And Education)	388
Deep Learning for Classification and Growth Prediction of Turmeric and Sugarcane Crops Deva raj (K S Rangasamy College of Technology), Gokulrajan P (K S Rangasamy College of Technology), Gowtham S (K S Rangsamy College of Technology), and Mugilan D (K S Rangsamy College of Technology)	393
Fake Review Detection and Classification using Improved Convolutional Neural Network on Amazon Dataset Sasikala C (KPR Institute of Engineering and Technology), Ramya S (KPR Institute of Engineering and Technology), RajeshKumar S (KPR Institute of Engineering and Technology), Ramachandramoorthy K B (KPR Institute of Engineering and Technology), VijayaKumar S (KPR Institute of Engineering and Technology), and Umapathi K (KPR Institute of Engineering and Technology)	398
Battery Health Prediction using Deep Hybrid Learning Rahul Anil Nair (SRM Institute of Science and Technology), Dev Karan Suresh (SRM Institute of Science and Technology), and Rajeswari D (SRM Institute of Science and Technology)	404
Revolutionizing Seating Posture using SVM Algorithm Model & Image Processing	411
Multispectral Satellite Image Dehazing and Pollution Estimation Sai Avinash G (Jain University), Nishen Ganegoda (Jain University), Naga Kushal Ageeru (Jain University), Shaistha M (Jain University), and John Basha M (Jain University)	418
Design of Smart Shoe for Women Safety with Emergency Alert System Hareni M (K.S.Rangasamy College of Technology), Abishaya S (K.S.Rangasamy College of Technology), Kavya P (K.S.Rangasamy College of Technology), and Rajasekar K (K.S.Rangasamy College of Technology) Covid-19 Classification Model based on Age and Gender Analysis using SWHO-based	424
Deep CNN	_431
Cirrhosis Prediction in Chronic Liver Disease Patients using Machine Learning Techniques Athish V P (SRM Institute of Science and Technology), Sree Nandha S S (SRM Institute of Science and Technology), and Rajeswari D (SRM Institute of Science and Technology)	437
Skin Cancer Detection and Control Techniques using Hybrid Deep Learning Techniques Nagaraj P (Kalasalingam Academy Of Research And Education), Suresh Kumar S (Kalasalingam Academy Of Research And Education), V. Saijagadeeshkumar (Kalasalingam Academy Of Research And Education), G. Pavan Kumar (Kalasalingam Academy Of Research And Education), K. Yerriswamyreddy (Kalasalingam Academy Of Research And Education), and K. Jaya Krishna (Kalasalingam Academy Of Research And Education)	442

Machine Learning Techniques for Predicting Stock Closing Prices	447
Vikas Patel (Delhi technological university), Ashwani Kumar (Punjab engineering college), and Deepak Yadav (Delhi technological university)	
A Novel Approach Towards Fashion Trend Analysis System using Machine Learning Apoorv Bajpai (Amity University), Namrata Dhanda (Amity University), Rajat Verma (Pranveer Singh Institute of Technology), and Kapil Kumar Gupta (Amity University)	453
Rice Grain Quality Determination using OTSU s Thresholding Method Megalan Leo L (Sathyabama Institute of Science and Technology) and Gourav T (Sathyabama Institute of Science and Technology)	458
Age, Gender and Emotion Recognition by Speech Spectrograms using Feature Learning Yash Karbhari (G.K. Pate (Wani) Institute of Management), Vaibhav Patil (G.K. Pate (Wani) Institute of Management), Pranav Shinde (G.K. Pate (Wani) Institute of Management), and Satish Kamble (G.K. Pate (Wani) Institute of Management)	466
An Effective Machine Learning-based Segmentation and Feature Extraction Technique for	455
Muscular-disorder	475
Exploring Multifaceted CNN Architectures for Enhanced Detection of Multiple Sclerosis A. Chetana Reddy (Gokaraju Rangaraju Institute of Engineering and Technology), Ch Akhila (Gokaraju Rangaraju Institute of Engineering and Technology), Kalyan . (Gokaraju Rangaraju Institute of Engineering and Technology), and Mohd. Javeed Mehdi (Gokaraju Rangaraju Institute of Engineering and Technology)	483
An Effective Application of Deep Learning in the Early Diagnosis of Stroke Ramesh Babu (Marri Laxman Reddy Institute of Technology and Management) and N.Pushpalatha (Marri Laxman Reddy Institute of Technology and Management)	490
Role of Artificial Intelligence in Input Tax Credit Reconciliation Rakesh Kumar (Graphic Era University), Rupa Khanna Malhotra (Graphic era Deemed to be University), Shweta Pandey (Uttaranchal University), Anita Gehlot (Uttaranchal University), Indu Gautam (Gurukul Kangri vishwavidyalaya), and Shailesh Chamola (Uttaranchal University)	497
Artificial Intelligence in Contending Climate Change to Achieve Environmental Justice Tanmay Dhar (Uttaranchal University), B S Rawat (Uttaranchal University), Shweta Pandey (Uttaranchal University), Vikrant Pachouri (Uttaranchal University), and Abhinav Kathuria (Uttaranchal University)	502
Imperative Role of AI in Employee Engagement: The Lens of Job Charactersitics Model Bipin Kandpal (Uttaranchal University), Deepti Sharma (Uttaranchal University), Samta Kathuria (Uttaranchal University), and Shaik Vaseem Akram (Uttaranchal University)	507
Automation of Road Infrastructure: Indulgence of AI, Big Data Analytics & AR Vikrant Pachouri (Uttaranchal University), Samta Kathuria (Uttaranchal University), Anita Gehlot (Uttaranchal University), Prafful Negi (Uttaranchal University), Abhinav Kathuria (Uttaranchal University), and Mahima Chaudhary (Uttaranchal University)	512

Artificial Intelligence Indulgence in Protection of Cybercrime	518
Technological Powered Impersonation in MOOC Learning Pavan Kumar Shukla (Noida Institute of engineering and technology), Apranjal Singh (Rajshree institute of management and technology), Sharmila . (Government Girls Polytechnic), Ankur Sharma (Institute of Technology and Science Mohan Nagar), Praveen Kumar Malik (Lovely Professional University), and Samta Kathuria (Uttaranchal University)	523
Crop Disease Detection using Yolo V5 on Raspberry Pi	528
An Extensive Study for Detection of Chronic Renal Disease by Utilizing Deep Learning Algorithm on Medical Images Tanya Saraswat (Amity University), Abhishek Singhal (Amity University), Krishna Sahu (Amity University), Sanya Sachdeva (Amity University), and Rahul Sawhney (Amity University)	534
Fully Automated Pothole Detection and Repair System using Artificial Intelligence Dattatray Hulwan (Vishwakarma Institute of Technology), Milind Rane (Vishwakarma Institute of Technology, India), Anirudha Dalvi (Vishwakarma Institute of Technology), Anvay Kulkarni (Vishwakarma Institute of Technology), Aayush Shah (Vishwakarma Institute of Technology), Ameya Bhave (Vishwakarma Institute of Technology), and Vhanneshwar Arawat (Vishwakarma Institute of Technology)	540
Electricity Demand Forecasting Using ML J Joshua Daniel Raj (New Horizon College of Engineering), Mohan Das R (New Horizon College of Engineering), Vinod Kumar S (New Horizon College of Engineering), Jayanthi M (New Horizon College of Engineering), Sujin Jose A (New Horizon College of Engineering), and Tejas V (New Horizon College of Engineering)	547
A Review on Various Plant Disease Detection using Image Processing Diksha Tandekar (G H Raisoni College of Engineering) and Snehlata Dongre (G H Raisoni College of Engineering)	552
Finger Print Voting System using Minutiae Algorithm V V Pavan Kumar (Kalasalingam Academy Of Research And Education), Parivazhagan A (Kalasalingam Academy Of Research And Education), Bommireddy Venu (Kalasalingam Academy Of Research And Education), N. Sai Vikas Varma (Kalasalingam Academy Of Research And Education), and Valipi Bhanu Prakesh (Kalasalingam Academy Of Research And Education)	559
Analysis for Designing a Symptom-based Health Improvement System using Machine Learning Aman Gupta (Chandigarh University), Abhinav Chauhan (Chandigarh University), Bhagyansh Kumar (Chandigarh University), and Shanu Khare (Chandigarh University)	564
Camera Model Identification with Convolutional Neural Network Komal Mehta Bhagat (BPIT), Prachi Kaushik (BPIT), and Harsh Nigam (BPIT)	569

Image Understanding of GUI Widgets for Test Reuse Yash Mishra (VIT University), Prithak Gajurel (VIT University), Prajwal Lamsal (VIT University), and Swarnalatha P (VIT University)	_572
House Price Rate Change Prediction using Machine Learning R Ravinder Reddy (Chaitanya Bharathi Institute of Technology), E Padmalatha (Chaitanya Bharathi Institute of Technology), and S Durga Devi (Chaitanya Bharathi Institute of Technology)	_580
Fingerprint Recognition using SVM and CNN E Krishna Rao Patro (Institute of Aeronautical Engineering), M Geetha Yadav (Institute of Aeronautical Engineering), Gandla Sathvika (Institute of Aeronautical Engineering), Madavaram Laya (Institute of Aeronautical Engineering), and M Srija (Institute of Aeronautical Engineering)	_586
Smart Proctoring System using AI Lokesh Reddy Bommireddy (Vignan s Foundation For Science, Technology&Research), Ravi Teja Marasu (Vignan s Foundation For Science, Technology&Research), Rohith Prabhanjan Karanam (Vignan s Foundation For Science, Technology&Research), and K. Santhi Sri (Vignan s Foundation For Science, Technology&Research)	_591
Smart Voice-guided Assistance Stick for the Visually Impaired M. Ashok Kumar (SCAD College of Engineering and Technology), K. Banupriya (SCAD College of Engineering and Technology), N. Durga (SCAD College of Engineering and Technology), Sadhana Shri Dharmarajan (SCAD College of Engineering and Technology), S. Keerthik Kumar (SCAD College of Engineering and Technology), and A. Justin Diraviam (SCAD College of Engineering and Technology)	_594
A Machine Learning Approached Model to Identify the Object for Visually Impaired Person Sunita Joshi (Manav Rachna International Institute of Research Studies), Neha Gupta (Manav Rachna International Institute of Research & Studies), Mitali . (Manav Rachna International Institute of Research & Studies), and Gautam . (Manav Rachna International Institute of Research & Studies)	_599
Potato Plant Leaf Disease Detection and Recognition using R-CNN Model Minu Balakrishnan (Sri Eshwar College of Engineering), Raja M (CMR Institute of Technology), P. Vinoth Kumar (Chennai Institute of Technology), Suvitha Subramaniam (KPR Institute of Engineering and Technology), and Latha R (Saveetha Institute of Medical and Technical Science- (SIMATS))	_605
Efficacy of Game-based Learning during Covid-19 Pandemic: Digital Response	_610
Drowsy Driver Alert System using OpenCV Sandeep Bhatia (Galgotias University), Bharat Bhushan Naib (Galgotias University), Amit Kumar Goel (Galgotias University), Lalit Kumar (Galgotias University), and Kritesh Singh (Galgotias University)	_614
An Enhanced Side Channel Secured PRESENT Light Weight Cipher for Smart Devices Tharini S (Dr. Mahalingam college of Engineering and Technology), Sherine Jenny R (Dr. Mahalingam college of Engineering and Technology), and Sudhakar R (Dr. Mahalingam college of Engineering and Technology)	620

Disease Identification using Deep Learning Techniques S. Santhi (KIT Kalaignarkarunanidhi Institute of Technology), M. Murugan (Agricultural University), and K. Sampathkuma (Agricultural University)	629
An Analysis of Machine Learning Techniques Applied in Early Prognosis of Diseases in Healthcare: A Review Paper Shreya Kalta (Chandigarh University) and Yogesh Banyal (Chandigarh University)	634
Smart Traffic Violation Detection System using Artificial Intelligence	640
Grade Classifcation of Breast Cancer using Deep-Learning Keshav Rajak (Delhi Technological University), Nipun Bansal (Delhi Technological University), Rahul Anand (Delhi Technological University), and Vineet . (Delhi Technological University)	649
Crime Scene Object Detection from Surveillance Video by using Tiny YOLO Algorithm Uganya G (R&D Institute of Science and Technology), I. Sudha (Saveetha Institute of Medical and Technical Science (SIMATS)), V. Lakshmanan (Sri Eshwar College of Engineering), Finney Daniel Shadrach (KPR Institute of Engineering and Technology), P. Muthu Krishnammal (VIT University), and Nandhini T J (Saveetha Institute of Medical and Technical Science- (SIMATS))	654
Optimal Service Reconfiguration and Restoration of Network using Cuckoo Search and Prim s Algorithms T. D Sudhakar (St. Joseph s college of engineerin) and H. Prasad (St. Joseph s college of engineering)	660
Hybridization of Sector and Extremity based Segmentation for Early Detection of Osteoporosis J. Rajalakshmi (Velalar College of Engineering and Technology), M. Ponni Bala (Velalar College of Engineering and Technology), and S. Maheswari (Velalar College of Engineering and Technology)	667
Diagnosis of Breast Cancer on Mammography using Attention-Based Convolutional Network Shebna V (Francis Xavier Engineering) and R. Prem Ananth (Francis Xavier Engineering)	eural 674
A Framework for Fault Recognition of Photovoltaic Plants with Convolutional Neural Network Bommineani Venkata Naga Balaji (Marri Laxman Reddy Institute of Technology and Management) and B. Ravi Prasad (Marri Laxman Reddy Institute of Technology and Management)	_680
A Robust Deep Neural Network Framework for the Detection of Dementia K. Sweety (Marri Laxman Reddy Institute of Technology and Management) and M. Nagalakshmi (Marri Laxman Reddy Institute of Technology and Management)	686
An Efficient Application of Hybrid Optimization with Deep Learning Approach in the Prediction of Cardiovascular Disease P. Saikrishna (Marri Laxman Reddy Institute of Technology and Management) and K. Abdul Basith (Marri Laxman Reddy Institute of Technology and Management)	692

Real Time Object Detection based on RCNN Technique Ajay P (Rathinam Technical Campus), Raja M (CMR Institute of Technology), A. Rizwanbasha (Jeppiaar Institute of Technology), Gokul P S (Chennai Institute of Technology), M. Hema (KPR Institute of Engineering and Technology), and Latha R (Saveetha Institute of Medical and Technical Science - SIMATS)	698
Enhancing System Stability with FACTS Devices using Deep Neural Network Algorithm Anurag Shrivastava (Saveetha Institute of Medical and Technical Sciences), Sumit Pundir (Graphic Era Deemed to be University), Ashish Sharma (GLA University), Arun Pratap Srivastava (Lloyd Institute of Engineering and Technology), Ravindra Kumar (Quantum University), and Akhilesh Kumar Khan (Lloyd Law College)	703
Battery Energy Management Systems in Active Distribution Network Anurag Shrivastava (Saveetha Institute of Medical and Technical Science), Anuj Raturi (Graphic Era Deemed to be University), Hemant Gupta (GLA University), Aln Rao (Lloyd Institute of Engineering and Technology), Surendra Singh (Quantum University), and Akhil Sankhyan (Lloyd Law College)	710
Detection and Classification of Lung Tumors using Machine Learning Algorithms Govinda Rajulu (ResMed Digital Health Technology), Devvret Verma (Graphic Era Deemed to be University), Yogendra Kumar (GLA University), A Kakoli Rao (Lloyd Institute of Engineering and Technology), Vikram Singh (Quantum University), and Ankush Kumar (Lloyd Law College)	716
Cognition-based Spectrum Sensing Techniques Abhay Chaturvedi (GLA University), Dibyhash Bordoloi (Graphic Era Deemed to be University), Hemant Gupta (GLA University), Aln Rao (Lloyd Institute of Engineering and Technology), Surendra Singh (Quantum University), and Akhil Sankhyan (Lloyd Law College)	723
Fuzzy based Sentiment Analysis of E-Com and S-Com Data using Transformer	5 20
Neural Network Anurag Shrivastava (Saveetha Institute of Medical and Technical Science), Prabhdeep Singh (Graphic Era Hill University), Hemant Gupta (GLA University), Rohit Kumar (Lloyd Institute of Engineering and Technology), Vikram Singh (Quantum University), and Om Krishna (Lloyd Law College)	730
Data Mining-based Classification Methods for Mental Health Prediction Roja Boina (Morrisville), S Sangeethapriya (SA Engineering College), Hemant Singh Pokhariya (Graphic Era Deemed to be University), Ashish Sharma (GLA University), Aln Rao (Lloyd Institute of Engineering and Technology), and Surendra Singh (Quantum University)	738
Early Stage Skin Cancer Detection using Image Processing Govinda Rajulu (Digital Health Technology), Parul Madan (Graphic Era Deemed to be University,), Neeraj Varshney (GLA University), Dinesh Yadav (Lloyd Institute of Engineering and Technology), Ashok Kumar Set (Quantum University), and Anil Thakur (Lloyd Law College)	744
Perception Sensors based Fusion System and Method for Controlling Vehicle Dler Salih Hasan (University of Salahaddin), Srinivasan D (S A Engineering College), Upendra Singh Aswa (Graphic Era Deemed to be University), Yogendra Kumar (GLA University), Aln Rao (Lloyd Institute of Engineering and Technology), and Yograj Singh (Quantum University)	750

Artificial Intelligence based Air Quality Monitoring System with Modernized Environmental	
Safety of Sustainable Development	756
P. William (Savitribai Phule Pune University), Gandikota Ramu	
(Institute of Aeronautical Engineering), Lavish Kansal (Lovely	
Professional University), Pravin P Patil (Graphic Era Deemed to be	
University), Ahmed Alkhayyat (The Islamic University), and A. Kakoli	
Rao (Lloyd Institute of Engineering and Technology)	
A Comparative Study in the Design of an ANN based Controller	762
Moazzam Haidari (Saharsa College of Engineering), D. Sengeni (CK	
College of Engineering and Technology), Mamata Choudhury (PSCMR	
College of Engineering and Technology), Hilda Jerlin C M (Panimalar	
Engineering College), Kallakunta Ravi Kumar (Koneru Lakshmaiah	
Education Foundation), and Vijay Singh (Graphic Era Deemed to be	
University)	
Effective Visualization and Trend Forecasting of Crime Data Through Big Data Analytics and	
Mining	769
Pd Mahendhiran (Sri Krishna College of Engineering and Technology),	
Apsara S K (Sri Krishna College of Engineering and Technology),	
Harshitha Vasudevan (Sri Krishna College of Engineering and	
Technology), and Nithish S (Sri Krishna College of Engineering and	
Technology)	
Intelligent Fire Detection and Alert System with Sensing Capabilities Powered by	
Artificial Intelligence	776
Yasir Abdullah R (Sri Krishna College of Engineering and Technology),	
Hariharan V C (Sri Krishna College of Engineering and Technology),	
Nithin K M (Sri Krishna College of Engineering and Technology),	
Swetha V (Sri Krishna College of Engineering and Technology), and	
Vijayaalayan A (Sri Krishna College of Engineering and Technology)	
An Automatic Scoring System for Wushu Movements based on Real-time Action Image	
Recognition and Matching Algorithm	782
Li Deng (Polus International College) and Hengru Liu (Chengdu Sport	
University Martial Arts Institute)	
Multi-terminal Collaborative Distributed Garden Planning System Integrating CG	
Technology	787
Ye Wang (Sanda University) and Qi Liu (Sanda University)	
	702
Morphology Extraction and Analysis of Calligraphy Fonts Images: A Novel Perspective	792
Guoxin Zhang (Kyonggi University)	
Optimization Strategy of Storage Layout with Video Information based on Multi-layer Coding	-
Genetic Algorithm	796
Bin Wang (Shandong Vocational College of Light Industry)	
Characteristic Analysis of Power Grid Disaster Early Warning Signal: A Case Study	801
Wei Zhang (Electric Power Research Institute of Guangxi Power Grid	
Co., Ltd), Shan Li (Electric Power Research Institute of Guangxi Power	
Grid Co., Ltd), Yangjun Zhou (Electric Power Research Institute of	
Guangxi Power Grid Co., Ltd), Jianna Ouyang (Electric Power Research	
Institute of Guangxi Power Grid Co., Ltd), and Zhidu Huang (Electric	
Power Research Institute of Guangxi Power Grid Co., Ltd,Guangxi)	
Computer Modeling of Agricultural Products Circulation Network with RFID Tag Sensing	
Algorithm	807
Wu Yue (State Governance Institute Tianjin Normal University)	

An Effective Image-based Improved Deep Neural Network Framework for Coal and Gange Detection	ae 813
M. Praveena (Dr SNS Rajalakshmi College of Arts and Science),	613
Afsana A (Dr SNS Rajalakshmi College of Arts and Science), T. Durga	
Devi (Dr SNS Rajalakshmi College of Arts and Science), S. Sudharsan	
(Dr SNS Rajalakshmi College of Arts and Science), and V. Arulkumar	
(Vellore Institute of Technology)	
Innovative Method for Accident Prevention in Construction Sites with Virtual Reality Analysis	817
N. Sreenivasaraja (Excel Engineering College), G. Velmurugan (Excel	
Engineering College), Shankar Ganesh. L (Excel Engineering College), and Marudhakavi. V (Excel Engineering College)	
Using Artificial Intelligence to Enhance Hazard Assessment and Safety Measures in	
Petrochemical Industries: Development and Analysis	823
S.R. Arun (Excel Engineering College), S. Karthik (Excel Engineering	
College), Vigneshwaran. S (Excel Engineering College), and Sasikumar.	
M (Excel Engineering College)	
Lung Cancer Detection by Artificial Intelligence using Deep Learning Techniques	831
Bhuvaneshwari v (Karpagam Academy of Higher Education), Jacklin J	
(Karpagam Academy of Higher Education), Malini R (Karpagam Academy	
of Higher Education), and Kamalraj Subramaniyam (Karpagam Academy of	
Higher Education)	
VGG19 Enhanced Convolutional Neural Network for Paddy Leaf Disease Detection	840
Hussain. A (SRM Institute of Science and Technology) and Balaji	
Srikaanth. P (SRM Institute of Science and Technology)	
Thyroid Classification using Deep Learning Techniques	845
K. Balasree (VISTAS) and K. Dharmarajan (VISTAS)	
Identification of Sickle Cell Anemia by Employing Hybrid Optimization and Recurrent Neural Network	853
Gosika Prashanthi (Marri Laxman Reddy Institute of Technology and	655
Management) and S Pratap singh (Marri Laxman Reddy Institute of	
Technology and Management)	
Applications	
Survey on Smart Helmet based on IoT for Detection of Road Accidents	859
Kamalammagari Anish (Koneru Lakshmaiah Education Foundation), Kiran	
Gavara (Koneru Lakshmaiah Education Foundation), Maruthi Ram K (Koneru Lakshmaiah Education Foundation), Adilakshmi priya S (Koneru Lakshmaiah	
Education Foundation), A.Dinesh Kumar (Koneru Ľakshmaiah Education	
Foundation), and A. K.Velmurugan (Koneru Lakshmaiah Education Foundation)	
	0.45
EaseIt: An Android based Health Monitoring Mobile Application	865
Sharon Natasha Francis (Karunya Institute of Technology and Sciences) and Shirley C. P (Karunya Institute of Technology and Sciences)	
	070
Blockchain using Private Cloud for Secure EHRS Systems A Pandiarai (Valasalingam Academy of Research and Education), P.	873
A. Pandiaraj (Kalasalingam Academy of Research and Education), P. Nagaraj (Kalasalingam Academy of Research and Education), P. Bharath	
Kumar (Kalasalingam Academy of Research and Education), P. Rasi	
(Kalasalingam Academy of Research and Education), M.Naga Lakshmi	
Bhavani (Kalasalingam Academy of Research and Education), and CH.	
Varshith Reddy (Kalasalingam Academy of Research and Education)	

Identification of DDoS Attack on IoT Network using SDN Nisha Ahuja (Benett University) and Debajyoti Mukhopadhyay (Benett University)	_ 879
ATM Assisting Device for Secure Transactions using GSM Technology Kalirajan K (KPR Institute of Engineering and Technology), Suganya D N (KPR Institute of Engineering and Technology), Survesh Hari S (KPR Institute of Engineering and Technology), Sanjay K M (KPR Institute of Engineering and Technology), and Vishnu Raj S (KPR Institute of Engineering and Technology)	_ 885
Memory Optimization and Computing of Emojis-based IoT Smart Pot	_ 890
Malware Exposed: An In-depth Analysis of its Behavior and Threats Chinmay Anand (New Horizon College of Engineering), Shreya Korada (New Horizon College of Engineering), Raksha S (New Horizon College of Engineering), B.Meenakshi Sundaram (New Horizon College of Engineering), and B. Rajalakshmi (New Horizon College of Engineering,)	_ 894
I/O Steganography for Audio and Images in Secure Data Transmission Jebakumar Immanuel D (SNS College of Engineering), Prakash A (SNS College of Engineering), Mugundhan M (SNS College of Engineering), Keerthivasan U (SNS College of Engineering), and Uma Makesan A (SNS College of Engineering)	_ 903
Resisting Visual Hacking: A Novel Graphical Password Authentication System Ramalingam V (SNS College of Engineering), Jebakumar Immanuel D (Karpagam Institute of Technology), Tharun Kumar P (SNS College of Engineering), Akash Iyer (SNS College of Engineering), and Narayanan M S (SNS College of Engineering)	_ 910
Underwater Wireless Sensor Networks Using Distributed Fusion of Optimally Quantized Estimations from Local Trackers Yogesh Pal (Bennett University), Ravi Mohan (Shri Ram Institute of Technology), Ganga Rama Koteswara Rao (Koneru Lakshmaiah Education Foundation), Suresh kumar. A (Rathinam Technical Campus), Ravi Rastogi (NIELIT), and Mohd Asif Shah (Chandigarh University)	_ 916
Smart Health Card using Mobile Application and IoT Device Keerthana A (Easwari Engineering College), Amruthashreya G (Easwari Engineering College), and V.S. Janani (Easwari Engineering College)	_ 922
An Optimized Decentralized Trust Approach for Securing IoV Stream Data: A Smart Contract-Driven Framework Balasubramani S (KL Deemed to be University), Pamidi Trinesh Kumar (Hindustan Institute of Technology and Science), and Nukala Rohith Ganesh (Hindustan Institute of Technology and Science)	_ 928
An Exploratory Analysis of Cloud Security Models in Social Networks	_ 935
Network Scalability Analysis of Distance-Vector and Link-State Routing Algorithms: A Comparative Study Chinmay Sandeep Naik (COEP Technological University), Harsh Nilesh Pande (COEP Technological University), and Satish S. Kumbhar (COEP Technological University)	_ 942

Geriatric Fall Detection and Protection based on IoT	947
Thirukovela Rishitha (GRIET), A. Udaya Shanker (GRIET), Varthya Aarthi (GRIET), T. Padma (GRIET), and Ch Usha Kumari (GRIET)	
IoT based Intelligent Pill Dispenser for Elderly People Deepan P (K S Rangsamy College of Technology), Hemavarshini J P (K S Rangsamy College of Technology), Kowsalya P (K S Rangsamy College of Technology), and C. Rajasekaran (K S Rangsamy College of Technology)	951
IoT based Smart Energy Consumption and Monitoring System Abdul Jaleel M M (B. S. Abdur Rahman Crescent Institute of Science and Technology), Syed Suhail Aziz P (B. S. Abdur Rahman Crescent Institute of Science&Technology), Hemavathy P R (B. S. Abdur Rahman Crescent Institute of Science & Technology), Susai Mary J (B. S. Abdur Rahman Crescent Institute of Science & Technology), and Kanagaraj Venusamy (Rajalakshmi Engineering College)	956
Highly Secure Approximate Adiabatic Logic for Error Tolerant Applications	962
Enhancing Supply Chain Traceability with Blockchain Technology: A Study on Dairy, Agriculture, and Seafood Supply Chains	967
Revolutionizing Industries Through IoT, Blockchain and AI Integration Suji Priya J (Sona College of Technology), Aruna S (Sona College of Technology), Usha ranee L (Sona College of Technology), Tasneem Firdhosh A (Sona College of Technology), Malavikka S (Sona College of Technology), and Monika S (Sona College of Technology)	972
Efficient Multi Authority Attribute Based Signcryption S Uma (Panimalar Engineering College), Mabroor Ali C (Panimalar Engineering College), Parthasarathy E (Panimalar Engineering College), and Abdul Mohamed Yagoop S (Panimalar Engineering College)	978
Internet of Things Towards the Implementation of a Smart City Srinivasan C (Saveetha Engineering College), Sridhar P (Sri Ramakrishna Engineering College), Pradeepa J (Saveetha Engineering College), Thulasiragavan P V (Saveetha Engineering College), and Yuvaraj R (Saveetha Engineering College)	984
Mindset, An Android-Based Mental Wellbeing Support Mobile Application	989
Simulation and Analysis of Congestion in Vehicle Networks	997
IoT And GSM Applications for Industrial Health Monitoring	1005

Real-time Water Quality Tracking and Alert System with IoT Integration	_1013
IoT-Enabled Smart Energy Meter for Improved Billing and Usage Monitoring D S Naga Malleswara Rao (Gokaraju Rangaraju Institute of Engineering & Technology), Ailaboina Prathyusha (Gokaraju Rangaraju Institute of Engineering & Technology), CH. Venkata Laxmi Priyanka (Gokaraju Rangaraju Institute of Engineering & Technology), and Manupuri Mrudhula (Gokaraju Rangaraju Institute of Engineering & Technology)	<u></u> 1019
LoRa based Real Time Level Control System for Non-Linear Spherical Tank System S. J. Suji Prasad (Kongu Engineering College), M. Thangatamilan (Kongu Engineering College), R. Sureshkumar (Kongu Engineering College), I. Charumithra (Kongu Engineering College), S. Jagadeshwaran (Kongu Engineering College), and M. Athif Ahamed (Kongu Engineering College)	_1024
An Efficient Deep Learning Technique for Intrusion Detection in Wireless Sensor Network Prity Kumari (Technocrats Institute of Technology and Science) and Rakesh Kumar Tiwari (Technocrats Institute of Technology and Science)	_1029
Decentralized Lottery using Blockchain Atharva Hire (Vishwakarma Institute of Technology), Harsh Lanjewar Lanjewar (Vishwakarma Institute of Technology), Prathamesh Haridas (Vishwakarma Institute of Technology), Makarand Jadhav (Vishwakarma Institute of Technology), and Milind Rane (Vishwakarma Institute of Technology)	1035
Privacy Preservation in Federated Learning: Its Attacks and Defenses Jyoti Maurya (Madan Mohan Malaviya University of Technology) and Shiva Prakash (Madan Mohan Malaviya University of Technology)	1042
Customer Segmentation and Market Analysis for Portfolio Generation Prachet Balaji (SRM Institute of Science and Technology), K. Vijaya Kumar (SRM Institute of Science and Technology), and Gayar Sai Kamal (SRM Institute of Science and Technology)	1048
Designing Web Application of Online Food Ordering for Restaurant Chain using Web Technologies Rahul Sonwane (G H Raisoni College of Engineering), Atul Deshmukh (G H Raisoni College of Engineering), and Swapna Choudhary (G H Raisoni College of Engineering)	1055
Maximize Computational Offloading Optimization Multi-User Multi-Access Fog Computing Wireless Networks	
Edge Computing: Architecture, Implications and Future with Latest Trends Krish Thakkar (Charotar University of Science and Technology), Akash Patel (Charotar University of Science and Technology), Aishwariya Budhrani (Charotar University of Science and Technology), Khushi Patel (Charotar University of Science and Technology), Sachin Patel (Charotar University of Science and Technology), and Amit Nayak (Charotar University of Science and Technology)	
Processing and Modification of Blockchain Transactions *Reepu (Chandigarh University)	1071

Design of Sensor Assisted Lake Water Cleaning Robot using Internet of Things Manikandan M (K.S.Rangasamy College of Technology), Suriya R (K.S.Rangasamy College of Technology), Prawin K K (K.S.Rangasamy College of Technology), and Rajasekaran C (K.S.Rangasamy College of Technology)	1077
Secure Forgery Detection in Android Malware Applications with Trust Analysis in Google Play	1085
Sargunan P (IFET College of Engineering) and Umadevi @ Yasodhei S (IFET College of Engineering)	
Industrial Safety Management System using Wireless Communication Technology	1093
A Secured RSA Algorithm based Healthcare Monitoring System for IoT Devices	1098
Circumcenter based Mobile Beacon Aided Localization in Wireless Sensor Networks P. Thilagavathi (St. Joseph's College of Engineering) and J. Martin Leo Manickam (St. Joseph's College of Engineering)	1107
Smart Industrial Automation System using Logical Sensors with IoT Assistance Arvinthan D S (K S Rangsamy College of Technology), Gugan K (K S Rangsamy College of Technology), Kalaimanivel K A (K S Rangsamy College of Technology), and Kumar P (K S Rangsamy College of Technology)	1112
UVM based Design Verification with Semi-Automation Yugeshwari Nemade (Yeshwantrao Chavan college of Engineering), Prathmesh Pawar (Yeshwantrao Chavan college of Engineering), Pranjali Kadhi (Yeshwantrao Chavan college of Engineering), Rohini Shingne (Yeshwantrao Chavan college of Engineering), and Ujwala Ghodeswar (Yeshwantrao Chavan college of Engineering)	1118
A Review on Blockchain based Security in Education Sheela Rani P (Panimalar Engineering College), Kaveri C (Panimalar Institute of Technology), Nivedha M (Panimalar Institute of Technology), Niveda S (Panimalar Institute of Technology), Lakshi K (Panimalar Institute of Technology), and Sandhiya R (Panimalar Institute of Technology)	1122
Water Quality Sensor based on IoT	1128

Establishing Mesh Network to Transfer and Visualize Data for Safety of Underground Miners	1134
Mamta Kurvey (A. P. Shah Institute of Technology), Mahesh Pawaskar (A. P. Shah Institute of Technology), Saarth Nikam (A. P. Shah Institute of Technology), Radnyi Jagtap (A. P. Shah Institute of Technology), Siddhant Bhandary (A. P. Shah Institute of Technology), and Agatsya Acharya (A. P. Shah Institute of Technology)	
Hospital 4.0: Blockchain Helping in Hospitality Services	1140
Forest Fire Detection Via the Internet of Things-based Systems Prafful Negi (Uttaranchal University), Samta Kathuria (Uttaranchal University), Rajesh Singh (Uttaranchal University), Vikrant Pachouri (Uttaranchal University), and Namrata Kathuria (Uttaranchal University)	1144
Internet of Things and Blockchain for Monitoring of Sustainability of Smart Cities Sneha. (Lovely Professional University), Nilofar Shaikh (BVRIT Hyderabad College of Engineering for Women), Rajidi Sahithi (BVRIT Hyderabad College of Engineering for Women), Rashmi Roges (Lovely Professional University), Praveen Kumar Malik (Lovely Professional University), and Samta Kathuria (Uttaranchal University)	1150
Smart Energy Monitoring using Internet of Things: Opportunities and Challenges	1156
Air Pollution Monitoring by Indulging AI and IoT for Environmental Protection Pavan Kumar Shukla (Noida Institute of engineering and technology), Sharmila . (Government Girls Polytechnic Bareilly), Apranjal singh (Rajshree institute of management and technology), Nilofar Shaikh (BVRIT Hyderabad College of Engineering for Women), Ankur Sharma (Institute of Technology and Science Mohan Nagar), and Rajesh Singh (Uttaranchal University)	1161
Smart Environment Monitoring using Internet of Things and Big Data Neelesh Kumar Gupta (Ajay Kumar Garg engineering College), Achyutanand Mishra (Saupal Engineering College), Pavan Kumar Shukla (Noida Institute of engineering and technology), Ankur Sharma (Institute of Technology and Science Mohan Nagar), and Shweta Pandey (Uttaranchal University)	1166
A CNN Deep Learning Technique for Botnet Attack Detection for IoT Application Yashi Batham (Technocrats Institute of Technology and Science) and Prof. Rakesh Kumar Tiwari (Technocrats Institute of Technology and Science)	1171

Study of Cloud Providers (Azure, Amazon, and Oracle) According to Service Availability	
Price Anurag Rajput (Shri G.S. institute of technology & science), Puja Gupta (Shri G.S. institute of technology & science), Prapti Ghodeshwar (Shri G.S. institute of technology & science), Sunita Varma (Shri G.S. institute of technology & science), K. K. Sharma (Shri G.S. institute of technology & science), and Upendra Singh (Shri G.S. institute of technology & science)	1177
An Analysis on the Power Consumption of Nodes in Ad hoc IEEE 802.11 Networks H. M. Moyeenudin (Vels Institute of Science Technology and Advanced Studies), M. Narender (TKR College of Engineering & Technology), M. A. Mukunthan (R&D Institute of Science and Technology), Kanimozhiraman. (KCG College of Technology), and D. Balasubramanian (Jaya Engineering College)	1189
Blockchain and Machine Learning Security for the Internet of Things: A Bibliometric	1196
Analysis Jaideep Kaur Mudhar (Guru Nanak Dev University), Jyoteesh Malhotra (Guru Nanak Dev University), Ajay Kumar Singh (Chandigarh University), and Monika Anand (Chandigarh University)	1190
Intelligent Glasses for the Visually Impaired with Google Cloud API Netish V.P (SRM Institute of Science and Technology), M. Vidhya Lakshmi (SRM Institute of Science and Technology), Puli Venkatesh Kumar (SRM Institute of Science and Technology), K. Durga Devi (SRM Institute of Science and Technology), and Puli Nitish Kumar (St.Ann's College of Engineering and Technology)	1203
Crop Prediction using Machine Learning Techniques and IoT M. Lakshmi Haritha (R.M.K Engineering College), J. Sutha (AAA College of Engineering and Technology), J. Jeno Jasmine (R.M.K Engineering College), R. Deepa (R.M.K Engineering College), A. Thilagavathy (R.M.K Engineering College), and D. Naveen Raju (R.M.K Engineering College)	1207
Securing Academic Meetings in the Cloud: Exploring Effective Cybersecurity Strategies D. Sai Sujay (Koneru Lakshmaiah Education Foundation), N. Ajay (Koneru Lakshmaiah Education Foundation), A. Sai Chandu (Koneru Lakshmaiah Education Foundation), B. Surendra (Koneru Lakshmaiah Education Foundation), Anuradha Chokka (Koneru Lakshmaiah Education Foundation), and Kh Mothilal (Koneru Lakshmaiah Education Foundation)	1214
Strategies and Tools for Secure Path Navigation of the Visually Impaired Vimal S.P (Sri Ramakrishna Engineering College), Krithicraj .P (Sri Ramakrishna Engineering College), Premnath G (Sri Ramakrishna Engineering College), and Raguldev P (Sri Ramakrishna Engineering College)	1220
A Blockchain-based E-Voting System for India: Addressing Security Challenges with Aac Card Authentication	
Enhancing Pool Safety and Efficiency with an IoT Supported Monitoring System John Samuel Raj K (SCAD College of Engineering and Technology), Janarthanan K (SCAD College of Engineering and Technology), Mahesh Raj A (SCAD College of Engineering and Technology), Essaki Suriya A (SCAD College of Engineering and Technology), Durairaja M (SCAD College of Engineering and Technology), and Relin Francis Raj J (SCAD College of Engineering and Technology)	1232

Future of Shopping: IoT enabled Automatic Bespoke Shopping	238
IoT Enabled Waste Management Optimization Framework (IWMOF) Thirupathieswaran R (SCAD College of Engineering and Technology), Palanivel Rajan K (PSNA College of Engineering and Technology), Niranjana R (Sri Krishna College of Engineering and Technology), Essaki Muthu A (SCAD College of Engineering and Technology), Santhana Krishnan R (SCAD College of Engineering and Technology), and Saravanan K (Anna University Regional Campus)	246
Design of Quadruple Band Toyota Logo Shaped Monopole Micro-Strip Antenna 12 Sumathi K (Akshaya College of Engineering and Technology), Nageswari D (Nehru Institute of Engineering and Technology), Santhi S (KIT-Kalaignarkarunanidhi Institute of Technology), and Revathi R (KIT-Kalaignarkarunanidhi Institute Technology)	253
Low-cost Anesthesia Machine using IoT	261
DevOps for Edge Computing: Challenges and Solutions	267
Air Quality Hotspot Monitoring with Trajectories of IoT in Smart City Implementation	274
Schema Design with Intelligent Multi Modelling Edge Computing Techniques for Industrial	
Applications	280
PG-Life: A Web based Application for Paying Guest Life Bhargav Sreevatsa KNG (Jain University), Swaroop . S (Jain University), Viraat M (Jain University), Nitin M (Jain University), Krishna S Nair (Jain University), and Garima Sinha (Jain University)	286
A Review on Optimization and Feature Selection Techniques for Data Security in IoT	290

IoT based Multi-Level Remote Controlled Security System Prabumanoj S J (Sri Venkateswara College of Engineering), Kathirvel R (Sri Venkateswara College of Engineering), Kalaivanan M (Sri Venkateswara College of Engineering), and Muthukumar S (Sri Venkateswara College of Engineering)	<u></u> 1295
Hybrid Model for Robotic Surveillance using Advance Computing Techniques with IoT	_1301
A Review of Efficient Resource Allocation for mmWave D2D Communication in Cellular Networks using ML Algorithm N Md Bilal (Vellore Institute of Technology) and T Velmurugan (Vellore Institute of Technology)	1307
Protocol-based Security Mechanism for Satellite Networks	1313
Framework for IOT based Real-Time Monitoring System of Rainfall Water Level for Flood Prediction using LSTM Network P. William (Savitribai Phule Pune University), Oluwadare Joshua Oyebode (Afe Babalola University), Gandikota Ramu (Institute of Aeronautical Engineering), Sorabh Lakhanpal (Lovely Professional University), Keerat Kumar Gupta (Graphic Era Deemed to be University), and Hassan M. Al-Jawahry (The Islamic University)	1321
Telemedical Robot using IoT with Live Supervision and Emergency Alert S. Vimala (Panimalar Engineering College), G. Karthika (R.M.D. Engineering College), C. Geetha (R. M. K. Engineering College), R. Vijaya Kumar Reddy (Koneru Lakshmaiah Education Foundation), C. S. Sundar Ganesh (Karpagam College of Engineering), and R. Karthik Ganesh (SCAD College of Engineering and Technology)	1327
IoMT with Cloud-based BC Disease Diagnosis Healthcare Framework using Deep Convolut Neural Network with Long Short-Term Memory C.Naveeth Babu (Kristu Jayanti College), V.Kathiresan (Park's College), R. Gomathi (KGiSL Institute of Information Management), R. Karthik (Sri Krishna Adithya College of Arts and Science), S. Sugantha Priya (Dr SNS Rajalakshmi College of Arts and Science), and S. Senthil Kumar (Sri Ramakrishna Mission Vidyalaya College of Arts and Science)	
An IoT based Mitigation of Occupational Dust Risks in Glass Manufacturing Plants S.P. Venkatesan (Excel Engineering College), N. Sreenivasaraja (Excel Engineering College), R. Ranjani (Excel Engineering College), and M. Uma Maheshwari (Excel Engineering College)	_1338
Design and Analysis of IoT based Fire Suppression System for the Safety of Industry 4.0	1345

Development and Analysis of Novel IoT based Monitoring System for Fiber Reinforced Polymer
(FRP) Dust Extraction System in an Industrial Environment 4.0
Jegan Prabhu A (Excel Engineering College)
Development and Implementation of an IoT-based Safety Compliance Assessment Tool for Industrial Processes1360
S.P. Venkatesan (Excel Engineering College), M. Sanjay (Excel Engineering College), Gopinath R.V (Excel Engineering College), and M.S. Natarajan (Excel Engineering College)
Enhancing Maritime Safety through IoT-Integrated High-Pressure Water Mist Fire Fighting System
Improving Library Document Resource management and Data Sharing through Semantic Web Technology
College), and Kumar R (Kristu Jayanti College) Integrating IoT and Sensor Technology for Improved Industrial Safety Measures in the Textile Industry
Iot Enabled Sensors and Wireless Networks for Efficient Environmental Tracking Systems1387 P. Rathi Devi (J.J. College of engineering and technology), Y. Mohamed Badcha (J.J. College of engineering and technology), M. Priya (J.J. College of engineering and technology), S. Muthuveerappan (J.J. College of engineering and technology), S. Karthikeyan (J.J. College of engineering and technology), and P. John Britto (J.J. College of engineering and technology)
IoT-Enabled Integrated Safety Systems for Mitigating Human Hazards in Pneumatic-operated Buses
IoT-Enabled Waste Reduction and Recycling to Alleviate Environmental Hazards1400 J. Senthil Kumar (Excel Engineering College), S.P. Venkatesan (Excel Engineering College), Venkatramana P (Excel Engineering College), and Logeshwaran E (Excel Engineering College)
Optimizing Noise Reduction in Dual-Stream Turbofan Nozzles: CFD and IoT Analysis of Offset Stream Technology
An Empowered Intuitionistic Fuzzification Trust Oriented Approach to Handle Broadcast Storm Problem for Emergency Message Transfer in VANET K. Lakshmi (Government Arts College) and M.Soranamageswari (Government Arts College)

Development of Efficient Wireless Sensor Network for IoT Applications S. Shankar (Sri Krishna Arts and Science College), G. Deepika (St.	1419
Peter s Engineering College), G. Devi (PSNA College of Engineering and Technology), S. Ramesh (Saveetha University), Suraj Srivastava (I.K. Gujral Punjab Technical University), and S. Sandeep Kumar (Koneru Lakshmaiah Education Foundation)	
Study of Natural Language Processing for Sentiment Analysis	1425
Kavitha C.R (Amrita School of Computing), Rajarajan S J (S.A. Engineering College), R. Jothilakshmi (R.M.D. Engineering College), Kamal Alaskar (BharatiVidyapeeth (Deemed to be University) Institute of Management), Mohammad Ishrat (KoneruLakshmaiah Education Foundation), and V. Chithra Devi (PSNA College of Engineering and Technology)	
Blockchain with Client Assistance with the Transaction Reason Krishna Sree S B (Panimalar Engineering College), Jeyashruthi M (Panimalar Engineering College), Pavithra J (Panimalar Engineering College), and Uma S (Panimalar Engineering College)	1433
A Survey of Key Challenges in Integrating IoT and Cloud Security	1439
Design of Internet of Things based Remote Infusion Monitoring System A. Paramasivam (Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology), Masoodhu Banu. N. M (Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology), Udayakumar Anantharao (Medcuore Medical Solutions Private Limited), Sabitha Prabha. M (Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology), Ahamed Fathima Firdouse. M. J (Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology), and Dapheinkiru Dkhar (Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology)	1443
Cypher: A New Innovative Application-Level Internet Protocol	1448
IoT based Surveillance and Automatic Fire Extinguisher Robot Nagarajan D (JCT College of Engineering and Technology), Akilan M (JCT College of Engineering and Technology), Lino K V (JCT College of Engineering and Technology), Vibin M (JCT College of Engineering and Technology), and Vimal A (JCT College of Engineering and Technology)	1457
EEG Brainwave Data Classification of a Confused Student using Moving Average Feature Jay N. Mehta (University of Cincinnati College of Medicine), Hairya Lakhani (Smt.B.K.Shah Medical Institute & Research Centre), Harsh Dave (Smt.B.K.Shah Medical Institute & Research Center), Sheshang Degadwala (Sigma University), and Dhairya Vyas (The Maharaja Sayajirao University of Baroda Vadodara)	1461
Designing of Hybrid Controllers for Improved Gain Converter for EV Application	1467

Social Networking

Geologs: A Complete End-to-End Classroom Management System Bishal Mohari (Sathyabama Institute of Science and Technology), Bidipto Dey (Sathyabama Institute of Science and Technology), Bhera Ram (Sathyabama Institute of Science and Technology), Albert Mayan J (Sathyabama Institute of Science and Technology), and Mary Posonia A (Sathyabama Institute of Science and Technology)	1473
Hand Gesture Vocalizer using MobileNetV2 for Deaf Mutes Shanthini E (Sri Ramakrishna Engineering College), Akshaya N (Sri Ramakrishna Engineering College), Harini Sri S (Sri Ramakrishna Engineering College), and Haritha J (Sri Ramakrishna Engineering College)	1481
Tuning and Optimization of Temperature in a Fatigue Sodium Loop of Fast Breeder Tank Reactor using PID Controller Madhan Mohan M (Kongu Engineering College), Vijayachitra.S (Kongu Engineering College), Karthikeyan M (Kongu Engineering College), Vincent J (Indira Gandhi Centre for Atomic Research), and J. ALWIN JOSEPH (Kongu Engineering College)	1486
Closed Loop Control of Induction Motor using Hall Effect Speed Sensors Nenavath Ramesh Babu (Teegala Krishna Reddy Engineering College), Khammampati R Sreejyothi (Teegala Krishna Reddy Engineering College), Vembadi Abhilash (Teegala Krishna Reddy Engineering College), Dandu Shiva Krishna (Teegala Krishna Reddy Engineering College), Kshathriya Sai Singh (Teegala Krishna Reddy Engineering College), and D Rajendra Prasad (Teegala Krishna Reddy Engineering College)	1491
Radio Frequency Identification based E-Shopping Cart	1496
An Adaptive Thresholding Framework for Detecting the Subsurface Movements in Landslide-prone Sites Adarsh P (Amrita Vishwa Vidyapeetham), Indukala P K (Amrita Vishwa Vidyapeetham), and Balaji Hariharan (Amrita Vishwa Vidyapeetham)	1502
EEG Signal Classification and Analysis for Upper Limbs using SVM and Random Forest Algorithm Kaaviya I (Dr. N. G. P. Institute of Technology), Abinaya K (Dr. N. G. P. Institute of Technology), Abishek Victor K (Dr. N. G. P. Institute of Technology), Harshene H (Dr. N. G. P. Institute of Technology), and B. Vidhya (Dr. N. G. P. Institute of Technology)	1508
Speech to Image Translation Framework for Teacher-student Learning Vijaylaxmi Bittal (SVKM s Institute of technology), Anuradha Sanjay Bachhav (SVKM s Institute of technology), Makarand Shahade (SVKM s Institute of technology), Pradnya Rajendra Chavan (SVKM s Institute of technology), Bhavesh Anil Nikam (SVKM s Institute of technology), and Ajinkya Anil Pawar (SVKM s Institute of technology)	1515
Efficient Beamforming Techniques in MU-MIMO K. Bhavana (Amrita Vishwa Vidyapeetham), Prahalad Krishna (Amrita Vishwa Vidyapeetham), Aswathy K Nair (Amrita Vishwa Vidyapeetham), Meenakshi. P (Amrita Vishwa Vidyapeetham), Riddhi Menon (Amrita Vishwa Vidyapeetham), and P. Kiran (Amrita Vishwa Vidyapeetham)	1521

Linear and Support Vector Regression for COVID-19 Prognostication	1528
Anveshini Dumala (Vignan s Nirula Institute Of Technology And Science	
For Women), Sai Tanmai Busi (Vignan s Nirula Institute Of Technology And Science For Women), Sai Ruchitha Rani Thokala (Vignan s Nirula	
Institute Of Technology And Science For Women), Pavithra Gadamsetty	
(Vignan s Nirula Institute Of Technology And Science For Women), and	
Sri Hasa Polisetty (Vignan s Nirula Institute Of Technology And	
Science For Women)	
Turtl: IPFS based Decentralized File Sharing System	1533
Pranay Ambre (St. John college of engineering and management),	
Shubham Bane (St. John college of engineering and management),	
Aakansha Singh (St. John college of engineering and management),	
Sonia Sharma (St. John college of engineering and management), and	
Manali Patekar (St john college of engineering and management)	
$Association\ between\ Students\ English\ Proficiency\ Exam\ Score\ and\ their\ Parental\ Education$	
Level using Chi-square Test	1538
University)	4=40
Wind Energy into Power using VAWT	1543
M. Sowmiya Manoj (Saveetha Engineering college), V. Chandra Sekar (Saveetha Engineering college), Dinesh V (Saveetha Engineering	
college), and Sathyan P (Saveetha Engineering college)	
Implementation of Bluetooth based Cargobot using Controlled Arduino Robocar	15/18
Tanuja S. Nikam (Sanjivani College of Engineering, Savitribai Phule	1340
Pune University), Soniya A. Pawar (Sanjivani College of	
Engineering, Savitribai Phule Pune University), Deepak Porwal	
(Sanjivani College of Engineering,Savitribai Phule Pune	
University), Dipesh B. Pardeshi (Sanjivani College of Engineering,	
Savitribai Phule Pune University), and P. William (Sanjivani	
College of Engineering, Savitribai Phule Pune University)	
LoRa based Precision Irrigation and Monitoring System	1554
Dillibabu M (Panimalar Engineering College), Arjun M (Panimalar	
Engineering College), Hariharan M S (Panimalar Engineering College),	
and Monish Lal O (Panimalar Engineering College)	
Development of PLC based Level Control System for Conical Tank System for Water Treat	
Plant	1563
Suji Prasad S.J. (Kongu Engineering College), Sureshkumar R. (Kongu	
Engineering College), Yogaabitha A (Kongu Engineering College), Vijayakumar B (Kongu Engineering College), Sakthivel M (Kongu	
Engineering College), and Purshothaman S (Kongu Engineering College)	
Pain Sense: Intelligent Pain Mapping System for Spinal Cord Injuries	1569
Kalyani Deshmukh (G.H.Raisoni College of Engineering and Management),	1507
Anurag Kule (G.H.Raisoni College of Engineering and Management),	
Pratik Bangal (G.H.Raisoni College of Engineering and Management),	
Shubham Udar (G.H.Raisoni College of Engineering and Management),	
and Simran Khiani (G.H. Raisoni College of Engineering and	
Management)	
Virtual Visit to Pilgrimages using Augmented Reality	1573
Ajay Sirsat (St.John College of Engineering and Management), Vishakha	
K. Prajapati (St. John College of Engineering and Management),	
Samiksha P. Raul (St. John College of Engineering and Management), Anuja Patil (St. John College of Engineering and Management), and Isha	
Kore (St. John College of Engineering and Management), und Isha Kore (St. John College of Engineering and Management)	
,,	

A Tour of a Technical and Educational Campus using Virtual Reality	578
An Efficient Full Adder by Investigating XOR and XNOR Logics with PMOS and NMOS15 Shivani Priyanga M (K.Ramakrishanan College of Engineering), Malini P (K.Ramakrishanan College of Engineering), and Maheswari M (K.Ramakrishanan College of Engineering)	584
FPGA Implementation of ECG Denoising using Kaiser Window Technique	589
A Novel Dairy Supply Chain Portal for Prediction of Milk Requirement	594
Road Maintenance System using YOLOV7	501
The Role of Augmented Reality and Virtual Reality in Shaping the Future of Health Psychology	604
Sustainable Environment with Technological Intervention: Benefits and Challenges 16 Vikrant Pachouri (Uttaranchal University), Samta Kathuria (Uttaranchal University), Anita Gehlot (Uttaranchal University), Prafful Negi (Uttaranchal University), Gaurav Thakur (Uttaranchal University), and Mahima Chaudhary (Uttaranchal University)	509
Tulu-based Algorithmic Language Model 16 Shweta Patki (PES University), Sri Ramya Priya Vedula (PES University), Sujay Ambekar (PES University), Vandana B (PES University), and Preethi P (PES University)	515
Half Mode Substrate Integrated Waveguide Antenna Embedded with Slots for Multibar Operations	

A Comparative Study of Power Electronics and Control Techniques for Renewable Energy	1.00
Integration in Smart Grids	_1629
University), Harpreet Kaur (Gulzar Group of Institutes), Raman kumar	
(Chandigarh University), and Jasgurpreet Singh Chohan (Chandigarh	
University)	
Fuzzy Logic in Computer Technology: Applications and Advancements	1634
Shashank Pareek (Chandigarh University), Hemant Gupta (GLA	
University), Jaspreet Kaur (Gulzar Group of Institutes), Raman kumar	
(Chandigarh University), and Jasgurpreet Singh Chohan (Chandigarh	
University)	
Food and Beverage Handling System with Automated Controls	_1638
S. J. Subhashini (SRM Madurai College for Engineering and Technology),	
J. JaneRubel Angelina (Kalasalingam Academy of Research and	
Education), V. Niteesh (Kalasalingam Academy of Research and	
Education), V. Venkata Reddy (Kalasalingam Academy of Research and	
Education), V. Krishna Sai (Kalasalingam Academy of Research and	
Education), and T. Pardha Saradhi (Kalasalingam Academy of Research and Education)	
,	
FPGA Implementation of Textural Feature Extractor and Distance based Classifier for Multi	1644
Modal Biometric Pattern Recognition System using Multi Resolution Approach S. Hariprasath (Saranathan College of Engineering), M. Santhi	_1044
(Saranathan College of Engineering), T.N. Prabakar (Sri Sairam College	
of Engineering), V. Koushick (Veltech Institute of Science and	
Technology), Aravind P (Mattu University), and T. Gunasekaran	
(University of Technology and Applied Sciences, Muscat, Sultanate of	
Oman)	
Hybrid Model to Address Software Controlled Arduino Robocar using Advanced Computing	_
Technique	_1651
Nihali A Aher (Sanjivani College of Engineering, Savitribai Phule	
Pune University), Chetan S Mulik (Sanjivani College of Engineering, Savitribai Phule Pune University), Deepak Porwal (Sanjivani College	
of Engineering, Savitribai Phule Pune University), Dipesh B.	
Pardeshi (Sanjivani College of Engineering, Savitribai Phule Pune	
University), and P. William (Sanjivani College of Engineering,	
Savitribai Phule Pune University)	
Transforming Traditional Medical Appointment Booking with Advanced Technologies and	
User-centric Design	1656
Avinash Naidu Mahanthi (Sathyabama Institute of Science and	
Technology) and T. Prem Jacob (Sathyabama Institute of Science and	
Technology)	
Multispeaker and Multilingual Zero Shot Voice Cloning and Voice Conversion	_1661
Ruby Dinakar (PES University), Anup Omkar (PES University),	
Kedarnath K Bhat (PES University), Nikitha M K (PES University), and P	
Aftab Hussain (PES University)	
Performance Improvement of Sliding Mode Controller of BLDC Drive for EV Applications	1666
V Usha Rani (Gokaraju Rangaraju Institute of Engineering and	
Technolgy), Prem Sai Saranga (Gokaraju Rangaraju Institute of	
Engineering and Technology), Rohith Shekar Vattem (Gokaraju and	
Rangaraju Institute of Engineering and Technology), Roshan Yadav	
Angadala (Gokaraju Rangaraju Institute of Engineering and Technology), and Sarthak Yogesh Padhiyar (Gokaraju Rangaraju Institute of	
Engineering and Technology)	
σ …ο τττουν	

Real-time Battery Equalization Circuitry for Series Battery Packs with Inverse-excitation Type Multi-directional DC-DC Converter	1672
Hemant Singh Pokhariya (Graphic Era Deemed to be University), Divesh Kumar (Graphic era hill university), and Bhalchandra M. Hardas (Shri Ramdeobaba College of Engineering and Management)	1072
Ultra Broadband Localization Method for Coal Mine Environments	1677
Online Monitoring Device for Mechanical Characteristics of High-voltage Circuit Breakers Ashish Garg (Graphic Era Deemed to be University) and Vivek Chamoli (Graphic era hill university)	1681
Controller Circuitry Design for a Voltage Dropping Type Power Factor Corrector Rajarao Manda (Graphic era hill university), Rajesh B. Raut (Shri Ramdeobaba College of Engineering and Management), and Ruchira Rawat (Graphic Era Deemed to be University)	1685
Impulsive Noise Mitigation for Power Communication Aditya Verma (Graphic Era Hill University) and Ramesh Singh Rawat (Graphic Era Deemed to be University)	1690
Nodes Performance Improvement UASN by using Biological Inspired Algorithm K. Sivasami (Indian Maritime University), S. Thangalakshmi (Indian Maritime University), K. Giridhar Reddy (R&D Institute of Science and Technology), B. Venkataramanaiah (R&D Institute of Science and Technology), and Caleb S (Saveetha Institute of Medical and Technical Science- (SIMATS))	1697
Enabling Remote Healthcare Platform for Rural & Urban Areas Prajwal Chavan (JSPM s Rajarshi Shahu College of Engineering), Harshal Ingale (JSPM s Rajarshi Shahu College of Engineering), Dipmala Salunke (JSPM s Rajarshi Shahu College of Engineering), Samprat Sakhare (JSPM s Rajarshi Shahu College of Engineering), Chetan Kadam (JSPM s Rajarshi Shahu College of Engineering), and Pallavi Tekade (JSPM s Rajarshi Shahu College of Engineering)	1702
Dual-Stage Channel Estimation using ANN and Hybrid RIS Aided MIMO Systems Pradheep T Rajan B (Francis Xavier Engineering College), Muthukumaran K (Sri Eshwar College of Engineering, India), Sai Meenakshinathan S (Francis Xavier Engineering College), Sai Kutthalingam S (Francis Xavier Engineering College), Thayaneshwaran M (Francis Xavier Engineering College), and Natesan I (Francis Xavier Engineering College)	1708
Control of A Virtual System with Hand Gestures Anurag Shrivastava (Saveetha Institute of Medical and Technical Science), Sumit Pundir (Graphic Era Deemed to be University), Ashish Sharma (GLA University), Aparna Srivastava (Lloyd Institute of Engineering and Technology), Ravindra Kumar (Quantum University), and Akhilesh Kumar Khan (Lloyd Law College)	1716
Implementation of the Tapered Fiber Sensor, for Measuring Failures Induced by Vibration in Rotary Electric Motors using the ANSYS Simulator	1722

Creating a 6-Axis Robot for Enhanced Assembly Line Safety in Automotive Manufacturing1 S. Karthik (Excel Engineering College), M. Nambi Rajan (Excel Engineering College), Monish N (Excel Engineering College), and Vimreshwaran K (Excel Engineering College)	.729
Effect of Fiber Layering and Acetylation Treatment on Mechanical and rate of Water Absorption Properties of Luffa Cylindrica Fiber Epoxy Composite	_1736
Enhancing the Safety of LPG Storage through the Implementation of Safety Instrumented Systems with IoT Technology M. Sanjay (Excel Engineering College), K. Vijay Babu (Excel Engineering College), Abin Yoonus (Excel Engineering College), and Ansool Jees Anto (Excel Engineering College)	_1743
Minimizing Risks in Close Proximity ARC Welding with Autonomous AI-Powered Welding System: Risk Assessment and Hazard Prevention G. Velmurugan (Excel Engineering College), S.R. Arun (Excel Engineering College), Venkatesh K (Excel Engineering College), and Venkatesh R (Excel Engineering College)	<u>1</u> 750
Assessment of the Environmental Impact of Solar Energy Systems in Urban Areas	_1756
PSO Pretrained ADP Based Control Scheme for Energy Storage System P. Kavitha (R.M.K. Engineering College), Leela Santi Parige (Bhavan s Vivekananda College of Science Humanities and Commerce), D. Sateesh Kumar (Koneru Lakshmaiah Education Foundation), P. Gowrishankar (Kongu Engineering College,), Ramya Maranan (Saveetha school of engineering), and Vinoth K (Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology, India)	_1762
Design and Implementation of Intelligent Controller based Auto-Wall Emulsion System B. Hemananth (Sri Eshwar College of Engineering), S. Sam Karthik (Dhanalakshmi Srinivasan College of Engineering), Satish Bojjawar (CVR College of Engineering), Ramesh Deshpande (B V Raju Institute of Technology), and M. Sundaram (PSG College of Technology)	1768
Assessing BigBirdPegasus and BART Performance in Text Summarization: Identifying Right Methods Abdulrahman Mohsen Ahmed Zeyad (REVA University) and Arun Biradar (REVA University)	_1773
Design and Simulation of Automatic Product Delivery Sorting Machine Depending on the Size Anurag Shrivastava (Saveetha Institute of Medical and Technical Science), Sumit Pundir (Graphic Era Deemed to be University),	_1779
Ashish Sharma (GLA University), Aparna Srivastava (Lloyd Institute of Engineering and Technology), Ravindra Kumar (Quantum University), and Akhilesh Kumar Khan (Lloyd Law College)	

Advancements in Speech Recognition Technology: A Cutting-Edge Tool for Impr	oved Speech
Analysis and Interaction	1786
Anurag Shrivastava (Saveetha Institute of Medical and Technical	
Science), Anuj Raturi (Graphic Era Deemed to be University), Ashish	
Sharma (GLA University), Aln Rao (Lloyd Institute of Engineering and	
Technology), Narender Chinthamu (Massachusetts Institute of	
Technology), and Akhil Sankhyan (Lloyd Law College)	

Author Index