

# **2020 Fourth International Conference on I-SMAC (IoT in Social, Mobile, Analytics and Cloud 2020) (I-SMAC 2020)**

**Palladam, India  
7 – 9 October 2020**

**Pages 1-648**



**IEEE Catalog Number: CFP20OSV-POD  
ISBN: 978-1-7281-5465-7**

**Copyright © 2020 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:	CFP20OSV-POD
ISBN (Print-On-Demand):	978-1-7281-5465-7
ISBN (Online):	978-1-7281-5464-0

**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](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

CURRAN ASSOCIATES INC.  
**proceedings**  
.com

## **4<sup>th</sup> International Conference on I-SMAC**

### **(IOT IN SOCIAL, MOBILE, ANALYTICS AND CLOUD)**

#### **Table of Contents**

<b>S. No</b>	<b>Paper Title/ Author Name</b>	<b>Page. No</b>
1	An IoT-Cloud Based Fractal Model for Brain Tumor Image Analysis Supriya Lenka, Sateesh Kumar, Sarojananda Mishra, Kalyan Kumar Jena	1
2	LoRa technology for Internet of Things (IoT): A brief Survey Liya ML, Aswathy M	8
3	IoT based Approach for Detection of Dominating Emotions in Persons Who Stutter Shaikh Abdul Waheed, P. Sheik Abdul Khader	14
4	A ROOF Computing Architecture based Indoor Positioning System for IoT Applications Navya C, Sanket Salvi, Nithin D Jacob, Sumeet Kumar	19
5	Modern Tree Plantation System Based on IoT Muskan Hossain Bithi, Fahad Faisal, Asif Karim, Sami Azam, Bharanidharan Shanmugam, Rajasekaran Lakshmiganthan	25
6	Internet of Things based Smart Farming Biswajit Sarma, Rupam Baruah, Abhigyan Borah	30
7	IoT based Hybrid Green Energy driven Street Lighting System Manoj R. Hans, Mahesh A. Tamhane	35
8	Comparison Study of Blockchain Technology and IOTA Technology Laith T. Khrais	42
9	Blockchain for IoT Enabled Supply Chain Management – A Systematic Review A. S. Sangeetha, S. Shunmugan, G. Murugan	48
10	IoT Enabled Smart Traffic System for Public and Emergency Mobility in Smart City Nagarjuna G R, Shashidhar R, Puneeth S B, Arunakumari B N	53
11	IoT System Accomplishment using BlockChain in Validating and Data Security with Cloud J. Kingsleen Solomon Doss, S. Kamalakkannan	60
12	IoT Based COVID Preventive System for Work Environment Kaaviya Baskaran, Baskaran P, Rajaram V, N. Kumaratharan	65
13	CNN based Smart Surveillance System: A Smart IoT Application Post Covid-19 ERA Rama Moorthy H, Vijeth Upadhy, Vidyesh V Holla, Sunil S Shetty, Vinay Tantry	72
14	A Review on Internet of Things (IoT) based Pulse Rate Blood Pressure, Body Temperature Monitoring System T. Mohanraj, B. Arunkumar, S. ShahulHammed, R. Santhosh	78
15	Internet of Things (IoT) based Energy Tracking and Bill Estimation System Rishi Mathur, Kamlesh Kalbande	80
16	IoT Enabled Drip Irrigation System with Weather Forecasting S. Divyapriya, R. Vijayakumar, M. Siva Ramkumar, A. Amudha, P. Nagaveni, G. Emayavaramban, Viyathukattuva Mansoor	86
17	A Comparative Study on Gateway Selection In IoT Ananya Ritu, Pohali Mahjabin Tanha, Wasema Nooren Islam, Sumaiya Islam, Amitabha Chakrabarty	90
18	Occipital Osteopathy and Radiation Detection for Reducing Insomnolence using IoT Enabled Pillow Soham Parlikar	96

19	Delineation of connected buses and smart bus shelter by employing IoT and Machine Learning E Saravana Kumar, Kishan Shetty, Kiran Saravana, Vikas Vinugna M K, A Santhosh Naidu	102
20	Air Quality Monitoring in a BIM model by means of a IoT Sensors Network Carlo Alberto Rosati, Andrea Cervo, Cesare Fantuzzi	110
21	Design and implementation of IoT Testbed with Improved Reliability using Conditional Probability Techniques Kayalvizhi Jayavel, Kanagaraj Venusamy, Lavanya . G	116
22	MQTT- CoAP Interconnector: IoT Interoperability Solution for Application Layer Protocols Madhavi Dave, Jyotika Doshi, Harshal Arolkar	122
23	IoT based Heart Rate Measurement and Analysis Priyanka Kumari Bhansali, Dilendra Hiran	128
24	Study of lightweight ABE for cloud based IoT Keerti Naregal, Vijay Kalmani	134
25	Garbage Collection System using IoT for Smart City Mohit Badve, Apoorva Chaudhari, Palak Davda, Vinal Bagaria, Dhananjay Kalbande	138
26	Saur Sikka : An IoT based Prototype of Basic Solar Power Trading Platform for Independent Distributed Nano-Grids Sanket Salvi, Sumeet Kumar, Nithin D Jacob	144
27	IoT Streaming Data Outlier Detection and Sensor Data Aggregation Sampath Kumar Y R, Champa H N	150
28	IoT based Classification Techniques for Soil Content Analysis and Crop Yield Prediction R. Reshma, V. Sathiyavathi, T. Sindhu, K. Selvakumar, L. SaiRamesh	156
29	A Study on IoT based Low-Cost Smart Kit for Coconut Farm Management S. Jaisankar, P. Nalini, K. Krishna Rubigha	161
30	Machine Learning Model for classification of IoT Network Traffic Shilpa P Khedkar, R. AroulCanessane	166
31	IoT enabled Aquaponics with wireless Sensor Smart Monitoring Praveen C Menon	171
32	Lossless Compression Techniques for Low Bandwidth IoTs Sudhir K. Routray, Abhishek Javali, Anindita Sahoo, Wogderes Semunigus, M. Pappa	177
33	GenNav: A Generic Indoor Navigation System for Mobile Robots Sudarshan S Harithas, Biswajit Pardia	182
34	Secure Log Scheme For Cloud Forensics Shweta N. Joshi, Geetha R.Chillarge	188
35	Design and Analysis of Koch Snowflake Fractal Antenna Array Saharsh S B, Sanoj Viswasom, Santhosh Kumar S	194
36	A Novel Privacy Preserving HMAC Algorithm Based On Homomorphic Encryption and Auditing for Cloud Anuj Kumar	198
37	Energy Efficient Next-Gen of Virtualization for Cloud-native Applications in Modern Data Centres BharaniDharan.G, Jayalakshmi.S	203
38	5G Technology for E-Health, Padmashree T, Sampan S Nayak	211
39	Development of LoRaWAN based Traffic Clearance System for Emergency Vehicles Alokkumar Rao, Bharat S. Chaudhari	217

40	Block chain Based Medical Reports Monitoring System M N. Thippeswamy, B. Mohan Sai Kiran, Pawan R Tanksali, Monica Hegde, Pooja Rani Naik	222
41	Design and Simulation of Elliptical Micro strip Patch Antenna with Coaxial Probe Feeding for Satellites Applications Using Matlab V. Prakasam, Navabharat Reddy	228
42	Cloud Allocation Technique: A Comparative Study Sayan Nath, Purbasha Bose, Avijit Mondal, Arnab Kumar Das	235
43	An Efficient Approach for Secured Data Aggregation Against Security Attacks in WSN R Menaka, R Dhanagopal, N Archana	239
44	Effectiveness of Word of Mouth Communication: Receiver Perspectives M. Vasana	246
45	U Slotted Wide Band Wearable Patch Antenna for WBAN Applications Shivani Sharma, M R Tipathy	252
46	WSN in Defence Field: A Security Overview Rama Moorthy H, Varsha Bangera, Zeba Amrin, Avinash N J, Krishnaraj Rao N S	258
47	A Study of BlockChain Technologies and Health Care Systems B. Arunkumar, T.Mohanraj, S. ShahulHammed, R. Santhosh	265
48	Cloud-based Protection and Performance Improvement in the E-Health Management Framework P. Kanchanadevi, D. Selvapandian, LaxmiRaja, R. Dhanapal	268
49	An Attribute Based Encryption Scheme with Dynamic Attributes Supporting in the Hybrid Cloud P. Kanchanadevi, LaxmiRaja, D. Selvapandian, R. Dhanapal	271
50	Design Analysis of Rectangular and Circular Microstrip Patch Antenna with coaxial feed at S-Band for Wireless Applications P. Upender, P. A. Harsha Vardhini	274
51	EAKOS – Energy Aware KMeans Offloading Scheme for Mobile Applications Maria Navin J R, Nagaraj M Lutimath	280
52	Data Compression for Wireless Sensor Networks: A Comparative Analysis Pushpalatha S, K. S. Shivaprakasha	284
53	Security Domain, Threats, Privacy issues in the Internet of Things (IoT): A Survey Shipra Singh, Kaptan Singh, Amit Saxena	287
54	Improved ElGamal Cryptosystem for Secure Data Transfer in IoT Networks Maya Mohan, M. K Kavithadevi, Jeevan Prakash V	295
55	Design and Implementation of Text and Audio Signal Transmission using Visible Light Communication Sabita Mali, Arun Agarwal, Sourav Kumar Singh, Dipika D.Pradhan	303
56	Design and BER Performance Analysis of MIMO and Massive MIMO Networks under Perfect and Imperfect CSI Sidharth Mohanty, Arun Agarwal, Sabita Mali, Gourav Misra, Kabita Agarwal	307
57	A Survey of LPWAN Technology in Agricultural Field Liya M L, Arjun D	313
58	A Study on Frequency Reconfigurable Antenna in Wireless Communication Systems Janisha R S,Vishnu D, Sheeba O	318
59	5G Technologies and Tourism Environmental Carrying Capacity Based on Planning Optimization with Remote Sensing Systems Nan Chen, Qing Yuan	322
60	Scalable Iot Solution using Cloud Services – An Automobile Industry Use Case Ankit Kumar Shaw, Amit Chakraborty, Debaniranjan Mohapatra, Subrata Dutta	326

61	Lightweight Cryptography Algorithms in IoT – A Study Pooja Shah, Mukesh Arora, Kinjal Adhvaryu	332
62	IP Based Surveillance Robot Using IoT M. Sunitha, P. V. S. S. Datta Vinay, V. S. N. Lokesh, B. Dinesh Kumar	337
63	A Comprehensive study on Vertical Handover for IEEE 802.21 Wireless Networks M. Naresh, D. Venkat Reddy, K. Ramalinga Reddy	343
64	Non-cryptographic Approaches for Collaborative Social Network Data Publishing - A Survey Komal Kansara, Bintu Kadhiwala	348
65	A Detailed Survey for Detection and Mitigation Techniques Against ARP Spoofing Vaishnavi Rohatgi, Shimpy Goyal	352
66	A Study on Real World Implementation and Future Trends of Internet of Things K. Issac, G. Pranay, Bharanidharan. N, Harikumar Rajaguru	357
67	IoT based State of the art Dam Management System in Indian Scenario Sri Rohith P, Catherin R, Bhanu Priya R, Prithvi Krishna K, Ramesh Kumar P	362
68	Impact of Patch-Size on Classification Accuracy of Latent Fingerprint Image in Stacked Convolutional Auto-encoder based Segmentation and Detection Megha Chhabra, Manoj Kumar Shukla, Kiran Kumar Ravulakollu	367
69	Image based Recognition of Plant Leaf Diseases: A Review Naina Nisar, Anjali Awasthi, Megha Chhabra, Ali Imam Abidi	373
70	Investigation on Watermarking Algorithm for Secure Transaction of Electronic Patient Record by Hybrid Transform G. Pradeepkumar, M.D. Saranya, K.S. Tamilselvan, Jhanani Shree U, Mazher Iqbal J L, S. Kavitha	379
71	An Efficient 3D Watermarking algorithm for 3D Mesh Models Manikamma Malipatil, Shubhangi D C	384
72	A Review on Application of Fourier Transform in Image Restoration Ann Maria John, Kiran Khanna, Ritika R Prasad, Lakshmi G Pillai	389
73	CNN based Nutrient Extraction from Food Images Dharani Devi P, Iyanar D	398
74	Finger Vein Recognition System Based on Multi-algorithm of Fusion of Gabor Filter and local Binary Pattern Waleed Dahea, H. S. Fadewar	403
75	Survey on Image Denoising Methods L. Sherlin Pravina, S. Shunmugan	411
76	Detection of Glaucoma Disease Using Image Processing, Soft Computing and Deep Learning Approaches Anuradha Pandey, Pooja Patre, Jasmine Minj	416
77	Transfer Learning based Tomato Ripeness Classification Prasenjit Das, Jaykant Pratap Singh Yadav	423
78	Performance Evaluation of Pre-Processing Techniques for Historical Palm Leaf Manuscript Image Restoration T. Jerry Alexander, S. Suresh Kumar, K. Muthuvel	429
79	Design and Development of A Diagnostic System for Early Prediction of P53 Mutation Causing Cancer From Microscopic Biopsy Images Lakshmi Anand. C, Krishnan Namboori. P. K	435
80	Accelerating Business Growth with Big Data and Artificial Intelligence Awishkar Ghimire, Surendrabikram Thapa, Avinash Kumar Jha, Surabhi Adhikari, Ankit Kumar	441
81	Raspberry Pi based Smart Library For Visually Challenged Citizens Nandalal, V. Anand Kumar, T. Manikandan, Sindhuprika K, Sujitha R, Suvathy G	449

82	1D CNN based fault diagnosis of switching devices and identification of fault for MMC Sayali S Gote, Pragati N. Korde	454
83	Telemedicine Application based on MIMO-OFDM system along with DWT Judy Simon, N. Prabhakaran	459
84	Design and development of the secondary energy meter for non-intrusive load monitoring using machine learning method Dhammughari Abhilash, L.V. Rajani Kumari, Vivekananda Reddy Palle	467
85	Machine Learning model for Breast Cancer Prediction Ankur Gupta, Dushyant Kaushik, Muskan Garg, Apurv Verma	472
86	Analysis of Traffic Flow at Intersection to Avoid Accidents using Nagel-Schreckenberg (NS) Model Abhijit S. Titarmare, Milind M. Khanapurkar, Pankaj H. Chandankhede	478
87	A Study on Combating Emerging Threat of Deepfake Weaponization Rahul Katarya, Anushka Lal	485
88	Computational Fuzzy Inference Logic for Effectively Analyzing Customer Survey S. Sahunthala, Angelina Geetha, Latha Parthiban	491
89	Theoretical Research on Strengthening Intelligent Realistic Problems of Ideological Online Education Platform from the Perspective of Information Theory Sanming Yu	498
90	Vehicle Trajectory Prediction using GAN Chinmayi Hegde, Suman Dash, Pooja Agarwal	502
91	Predicting Employee Turnover Intention in IT&ITeS Industry using Machine Learning Algorithms S K Monisaa Tharani, S N Vivek Raj	508
92	Pre-Processing and Emoji Classification of WhatsApp Chats for Sentiment Analysis Astha Mohta, Atishay Jain, Aditi Saluja, Sonika Dahiya	514
93	PACELC: Enchantment Multi-Dimension TensorFlow for Value Creation through Big Data A.Yasmin, S. Kamalakkannan	520
94	Deep Learning Approach for Minimizing Disease Spread using Face Identification and Contact Tracing N. Nanthini, B. Maruthi Shankar, S. Satheesh Kumar, R. Senthil Ganesh	527
95	AI Assisted Internet Finance Intelligent Risk Control System Based on Reptile Data Mining and Fuzzy Clustering Nana Yang	533
96	Impact of Supervised Classification Techniques for the Prediction of Student's Performance Rahul, Rahul Katarya	537
97	A Novel Smart Sanitation Module for Green Environment S. Karthik, A.Sharmila, Gokul Anand K R, Dhivya Priya E L	544
98	Webpage controlled surveillance bot using Raspberry Pi V. G. Rajendran, S. Jayalalitha, S. Radhakrishnan, S. Arunbhaarat	549
99	Design and Implementation of EDMA Controller for AI Based DSP SoCs for Real-Time Multimedia Processing Madhuri R A, Mahima M Hampali, Nisarga Umesh, Pooja K S, Yasha Jyothi M. Shirur , Veena S. Chakravarthi	554
100	Deep Learning model-based Multimedia Forgery Detection Yash Shah, Parth Shah, Mansi Patel, Chinmay Khamkar, Pratik Kanani	564
101	Application of Evolutionary Algorithm in Intelligent Analysis of Mining Instruments Kaitai Xiao	573

102	Machine Learning Model - based Prediction of Flight Delay N Lakshmi Kalyani, Jeshmitha G, Bindu Sri Sai U, Samanvitha M, Mahesh J, B. V.Kiranmayee	577
103	Emergency Situation Responder: An efficient Accident Response App Saurabh Rane, Tirth Parekh, Bhavik Sanghvi, Radha Shankarmani	582
104	ResQ - Smart Safety Band Automated Heart Rate and Fall Monitoring System Dev V. Savla, Soham Parekh, Ankit R. Gupta, Devansh Agarwal, Narendra M. Shekokar	588
105	WeGo: An Efficient Travel Assistant Application using Android Raji C.G, Ayman Gafoor, Hijas Ahammed, Aneesh Edavalath, Cijas PK	594
106	Auomatic Text Summarization Model using Seq2Seq Technique Chandrika Prasad, Jagdish S. Kallimani, Divakar Harekal, Nicy Sharma	599
107	START: Smart Stick based on TLC Algorithm in IoT Network for Visually Challenged Persons Rahul Johari, Nitesh Kumar Gaurav, Sapna Chaudhary, Apala Pramanik	605
108	Processing of Healthcare Data to Investigate the Correlations and the Anomalies Veena A, Gowrishankar S	611
109	Application of Machine Learning Techniques in Delay Modelling for Heterogenous Signalized Intersections Ravi Teja Sriram, Tallam Teja, Naveen Kumar Chikkakrishna	618
110	Construction of Audit Internal Control System Based on Online Big Data Mining and Decentralized Model Ying Wang, Saisai Guo, Jingwen Wu, Harry Haoxiang Wang	623
111	Diagnosis of Liver Disease Using Machine Learning Models A. Sivasangari, Baddigam Jaya Krishna Reddy, Annamareddy Kiran, P. Ajitha	627
112	Integrated Cloud Internet of Things for Realtime Applications Koduru Suresh, G Vinoth Kumar	631
113	Microcontroller based Automatic Sun Tracking Solar Panel Ghassan Khazal Ali, Aqeel Luaibi	636
114	Performance Analysis of Small Files in HDFS using Clustering Small Files based on Centroid Algorithm R. Rathidevi, R. Parameswari	640
115	DB-Scan Algorithm based Colon Cancer Detection and Stratification Analysis Gundlapalle Rajesh, Boda Saroja, M. Dhivya, A B Gurulakshmi	644
116	ANN based Study To Investigate The Parameters Influencing Collision Type on a Four Lane Divided National Highway Jella Sowjanya, Naveen Kumar Chikkakrishna, Teja Tallam	649
117	A Comparative Study of Melanoma Skin Cancer Detection in Traditional and Current Image Processing Techniques B. Sreedhar, Manjunath Swamy, M. Sunil Kumar	654
118	Detection of fraudulent transactions in credit card using Machine learning algorithms Praveen Kumar Sadineni	659
119	Heart Rate Variability for Predicting Coronary Heart Disease using Photoplethysmography Nimmala Mangathayaru, B.Padmaja Rani, V Janaki, Lakshmi Sowmya Kotturi, Manasa Vallabhapurapu, Vikas G	664
120	LSTM Neural Network Model with Feature selection for Financial Time series Prediction Nikhitha Pai, V. Ilango	672
121	Extractive Summarization of Telugu Documents using TextRank Algorithm K Usha Manjari	678
122	A Comparative Analysis of Machine Learning Approaches for Movie Success Prediction Ankit, Lakshmi M, K. Aditya Shastry, Aditya Sandilya, Rahul Shekhar	684



123	Predicting Driver's Decision- making behaviour in Amber phase using ML Techniques K Deepika, Tallam Teja, Naveen Kumar Chikkakrishna	690
124	An Effective Network Monitoring Tool for Distributed Networks Sharath Kumar, Pallavi S.Ramyashree	696
125	Multi-level Predictive with Training Framework (MP with TF) for Ranking Machine Learning Algorithms Terrance Frederick Fernandez, M. Pradeep	701
126	Big Data Privacy and Challenges for Machine Learning Puneet Himthani, Ghanshyam Prasad Dubey, Brij Mohan Sharma, Ankur Taneja	707
127	Efficient Electronic Document Access Control Management using Natural Language Processing Rumjhum Singru, Payal Bhandari, Krishna Patel, Prajakta Mane, Chinmay Gulhane	714
128	Attention Based Recurrent Neural Network for Lung Cancer Detection S. Sasikumar, K.Sakthidasan @ Sankaran, K. Ramesh, P. N. Renjith	720
129	Comparison of Tuplet of Techniques for Facial Emotion Detection Dasharath.K.Bhadangkar, Jagadeesh D. Pujari, Rajesh Yakkundimath	725
130	Challenges Encountered in Building A Fast And Efficient Surveillance System: An Overview Rama Moorthy H, Vijeth Upadhya, Vidyesh V Holla, Sunil S Shetty, Vinay V Tantry	731
131	Recognition of Plant Diseases using Convolutional Neural Network G. Madhulatha, O. Ramadevi	738
132	Monitoring Smart Devices for Personal Health Care Using Deep Analytics K. Tharageswari, D. Selva Pandian, Laxmi Raja, R. Dhanapal	744
133	ANN and SVM based Modelling of Stabilized Soils D. Deepak Kumar, D. Harinder	748
134	Analysis of Urban Traffic Bottleneck in Hyderabad city using Machine learning Techniques Pattepu Naresh, Teja Tallam, Naveen Kumar Chikkakrishna	756
135	A Personalized Cancer Diagnosis Using Machine Learning Models based on Big Data Ankit Singh, Sanjay Kumar Jain	763
136	Successful Role of Smart Technology to Combat COVID-19 Amtul Waheed, Jana Shafi	772
137	Driver Drowsiness Detection System based on LBP and Haar Algorithm Yuvraj Suryawanshi, Sushma Agrawal	778
138	CNN and Data Augmentation Based Fruit Classification Model Rucha Dandavate, Vineet Patodkar	784
139	Telugu Handwritten Character Recognition using Deep Residual Learning Bindu Madhuri Cheekati, Roje Spandana Rajeti	788
140	Collective Learning Ambiance of Human Pursuance with Intelligent Revival and Prediction Analysis K. Tharageswari, LaxmiRaja, D. Selvapandian, R. Dhanapal	797
141	Non Linear Predictive Modelling for IC Engine Using Artificial Neural Network N. Mohanasundaram	801
142	Overview of Anomaly Detection techniques in Machine Learning Akanksha Toshniwal, Kavi Mahesh, Jayashree R	808
143	Technological Transcends: Impact of Industrial 4.0 on Human Resource Functions Malini T N, D B Srinivas	816
144	Detection of Sleep Apnea & Cancer Mutual Symptoms Using Deep Learning Techniques Kanishk Barhanpurkar, Anand Singh Rajawat, Pradeep Bedi, Omair Mohammed	821

145	Study of Extractive Text Summarizer Using the Elmo Embedding Hritvik Gupta, Mayank Patel	829
146	FDLM: Fusion Deep Learning Model for Classifying Obstructive Sleep Apnea and Type 2 Diabetes Anand Singh Rajawat, Omair Mohammed, Pradeep Bedi	835
147	Study of Bot Technology to Provide High Performance and Accuracy using Slam Technology Sagar Shukla, Hrithik Sanyal, Rajneesh Agrawal	840
148	Smart Reader for Visually Impaired Krishnaraj Rao N S, Sandeep Kumar S, Santhosh S, Sudesh Rao, Krishna Kaushik P	846
149	RCBO – A Big Data Classification Based On an Efficient RCBO Optimization Technique and Apache Spark Anilkumar Vishwanath Brahmane, B. Chaitanya Krishna	851
150	Depression and Impaired Mental Health Analysis from Social Media Platforms using Predictive Modelling Techniques Vaibhav Jain, Dhruv Chandel, Piyush Garg, Dinesh Kumar Vishwakarma	855
151	Impact of COVID-19 on Digital Platforms and Change in E-commerce Shopping Trends Bhavna Galhotra, Ayushi Dewan	861
152	System Analysis and Error Detection: An Approach Towards Server Monitoring using Natural Language Processing Dimpy Bansal	867
153	Performance Analysis of Self Adaptive Equalizers using EPLMS Algorithms Shwetha N, Manoj Priyatham	872
154	Machine Learning Systems for Detecting Schizophrenia N V Swati, Indiramma M	877
155	The dynamics of Clostridium Difficile and commensal bacteria through the lens of Evolutionary Game Theory from Perspectives of Artificial Intelligence Tianxiao Jiang	881
156	Intelligent System of Smart City Construction Planning: from Data Mining to Data Perception Renbo Li	887
157	Information Reconstruction and Data Modeling and the Historical Dilemma of Contemporary Literature with Information Mining Jian Liu	891
158	Study on Machine Learning based Energy Efficiency in Developed Countries Aditya Verma, Yogesh Kumar	895
159	Machine Learning Algorithm based model for classification of fake news on Twitter Shivani S Nikam, Rupali Dalvi	900
160	Remotely Controllable Consumer Perspective Demand Response using Genetic Algorithm Kishore Kumar G K, Maniadarsh S, Thungeshwaran R, Ashwin M P, Jayabarathi R	904
161	Deep Convolutional Neural Networks Model-based Brain Tumor Detection in Brain MRI Images Md. Abu Bakr Siddique, Shadman Sakib, Mohammad Mahmudur Rahman Khan, Abyaz Kader Tanzeem, Madiha Chowdhury, Nowrin Yasmin	909
162	Electrocardiogram Heartbeat Classification Using Convolutional Neural Networks for the Detection of Cardiac Arrhythmia Mohammad Mahmudur Rahman Khan, Md. Abu Bakr Siddique, Shadman Sakib, Anas Aziz, Abyaz Kader Tanzeem, Ziad Hossain	915

163	Information Fusion Based Wheelchair Control for Paralyzed Patient Poornima G, Mohana kumar S	921
164	Comparative analysis between Wind Speed Prediction architectures using a two-hidden layer Neural Network Hir Gandhi	928
165	A Comparative Analysis of Deep Learning Approach for Automatic Number Plate Recognition Chinmaya Kumar Sahu, Sushree Barsa Pattnayak, Susantini Behera, Manas Ranjan Mohanty	932
166	Insights into the Impactful usage of Virtual Reality for End Users K. Malvika, S. Malathi	938
167	Prediction of Job Openings in IT Sector using Long Short -Term Memory Model R. Santhosh Kumar, N. Prakash, S. Anbuchelian	945
168	Design of Food, Medicine & Water Dispensing Automation Device Nilabh Niran, Dhrubajyoti Das, Dipak Das, Subhabrata Banerjee	954
169	Enhancement of Efficiency of Military Cloud Computing using Lanchester Model Choe Hyeon, Sagaya Aurelia	960
170	A Study on Machine Learning Based Conversational Agents and Designing Techniques Santhana Lakshmi V	965
171	Grey Wolf Optimizer algorithm-based unit Commitment Problem Karthikeyan. R	969
172	Relative Analysis of ML Algorithm QDA, LR and SVM for Credit Card Fraud Detection Dataset P Naveen, B Diwan	976
173	A Survey on Industrial Applications using MEMS and WSN Sushma Chowdary Polavarapu, Sampad Kumar Panda,	982
174	A Correlative Study of Centrality Measures across Real-World Networks Harshita Rastogi, Minni Jain	987
175	Class Imbalance Learning for Identity Management in Healthcare Ilavarasi A K	995
176	ML and DL based Classification model of Lung Cancer using Nodule Volume Popuri Ramesh Babu, Inampudi Ramesh Babu	1001
177	Comparative Analysis of Deep Network Models through Transfer Learning Nalini M. K, Radhika K. R	1007
178	Study of Game Theory Mechanism for Effective Sentimental Analysis using Natural Language Processing Srinivasa Rao Swarna, Sumati Boyapati, Abhishek Kumar,	1013
179	Quantum Neural Networks for Dynamic Route Identification to Avoid Traffic Sumati Boyapati, Srinivasa Rao Swarna, Abhishek Kumar	1018
180	Online Subjective answer verifying system Using Artificial Intelligence Jagadamba G, Chaya Shree G	1023
181	Texture Feature Analysis for the Liver Cancer Diseases using Statistical based Feature Extraction Technique Gururaj L Kulkarni, Sanjeev S Sannakki , Vijay S Rajpurohit	1028
182	Machine Learning Classifier Model for Attendance Management System M. Gopila, D. Prasad	1034
183	High Performance Electronic Voting Machine (EVM) Implementation Using ARM Cortex M3 Avinash N J, Chethan R, Sowmya Bhat, Renita Pinto	1040

184	Comparative Study on Skyline Query Processing Techniques on Big Data Praveen Kumar Sadineni	1045
185	Fuzzy Cloud Ranking Model based on QoS and Trust Mohammad Faiz, A. K. Daniel	1051
186	Human Activity Identification using CNN Neha Junagade, Shailesh Kulkarni	1058
187	Low Cost Voltage and Current Measurement Technique Using ATmega328p Fahad Faisal, Asif Karim, Md. Zahid Hasan, Bharanidharan Shanmugam, Muntasir Mahdi, Nazmun Nessa Moon	1063
188	Arduino based Automated Viscometer for Oil Health Monitoring Aparajith Srinivasan, Sharavane D P, Shwetha M P, Surendran S, Suryaprakash S, Jino Hans W	1069
189	Automated Gate Control with Backup Systems at Level Crossing Narasimha Kulkarni, Pawan Kumar Doddamani, Abheejit Chowdhary, Kavyashree S Kulkarni, Chaitra Shettar, Priya Pandey	1074
190	Comparison of Zero Downtime based Deployment Techniques in Public Cloud Infrastructure Chaitanya K. Rudrabhatla	1082
191	Design and Implementation of Tunable Network on Chip for FPGA applications Varsha Joy	1087
192	Harmonic Analysis of a Grid Connected rooftop Solar Energy System Achala Khandelwal, Pragya Nema	1093
193	Microcontroller based Automatic Sun Tracking Solar Panel Jayalakshmi B, Anjali V, Karthik A P, Nibin K, Sanoop Lal S, Akhil Rahmathullah	1097
194	Design of Fuzzy-Logic-Based Unified Power Flow Controller and Validation for Fault Conditions Rushikesh S. Jadhav, S.L. Shaikh	1100
195	Performance Evaluation of Non-Linear Techniques UMAP and t-SNE for Data in Higher Dimensional Topological Space Krishan Pal, Mayank Sharma	1106
196	Improving the Performance of Control System for Headbox Consistency of Paper Mill Using Simulated Annealing Sandeep Kumar Sunori, Abhijit Singh Bhakuni, Sudhanshu Maurya, Govind Singh Jethi, Pradeep Kumar Juneja	1111
197	Harvesting of Energy through Microwave frequency Abhinav Prajapati, Surekha Tadse	1117
198	Modelling of Syringe Infusion Pump Control System using FOPID Controller Sesha Pavan Tharimela, M. E. HariKumar	1123
199	Review of Micro-Services Architectures and Runtime Dynamic Binding J. Abdul Rasheedh, S. Saradha	1130
200	Delay in underwater Acoustic wireless Single Channel Communication : Stochastic Network Calculus Saravanan M, Rajeev Sukumaran, Christhuraj M.R, Manikandan TT	1138
201	Hardware Implementation of Cancellable Biometric Systems Lamiaa A. Abou elazm, Sameh Ibrahim, Mohamed G. Egila, H. shawkey, Mohamed K. H. Elsaid, Walid El-Shafai, Fathi E. Abd El-Samie	1145
202	Autonomous Industrial Ambient Robotic System Nusrat Shams, Tasfia Tasnim Labiba	1153

203	Behavior of Cascaded Binary Symmetric Channel for Different Number of Cascades Rohan, Neeraj	1159
204	Analyzing ECG waves in Fog Computing Environment using Raspberry Pi Cluster Pratik Kanani, Mamta Padole	1165
205	An Improved Early Detection Method of Autism Spectrum Anarchy using Euclidean Method Deepak. V, S. John Justin Thangaraj, M. Rajesh Khanna	1173
206	Micro Grid based Low Price Residential Home to Grid - Modeling And Control of Power Management System M. Siva Ramkumar, A. Amudha, M. Sivaramkrishnan, S. Divyapriya, P. Nagaveni, G. Emayavaramban, Viyathukattuva Mansoor	1179
207	Design High Gain Dual Stage Operational Amplifier using CMOS 45nm Technology Srilakshmi Raval, Madabhushanam, Lalitha Malladi, Soumya Reddy Gudepu	1184
208	A survey on enhanced RPL: Addressing the mobility in RPL Rajesh Kumar Yadav, Nimisha Awasthi	1189
209	High speed and efficient ALU using Modified Booth Multiplier B. Supritha, Kiran Mannem, B. Veera Reddy, K. Jamal, Manchalla. O. V. P. Kumar	1196
210	Dynamic Voltage Frequency Scaling in Multi-core Systems using Adaptive Regression Model Manjari Gupta, Lava Bhargava, Indu Sreedevi	1201
211	Operation Cost Minimization of Micro Grid using Particle Swarm Optimizer and Eagle Strategy Micro Grid's Operation Cost Minimization using PSO and ES Santhosh Kasi, R. Neela	1207
212	A Smart Algorithm for selection and design of Electromagnet for Electromagnetic Launchers Navya Raj, Shripad G. Desai, Kanishk Sharma, Manish Kumar, Hetal Verma	1213
213	Developing a framework to improve the accuracy of point-of-care testing for healthcare applications Kushal Rashmikant Dalal	1221
214	Importance of Trust in IoT based Wearable Device Adoption by Patient: An Empirical Investigation Vaidik Bhatt, Samyadip Chakraborty	1226
215	A Trust based Scheme for Spotting Malicious Node of Wormhole in Dynamic Source Routing Protocol Nisha Sharma, Manish Sharma, Durga Prasad Sharma	1232
216	Simulation based reactive power compensation by using TBSC/TBSR for dynamic load Manoj R. Hans, Manoj Kumar Nigam, Maheshwari D. Mirajkar, Brijesh Patel	1238
217	A comprehensive survey on Neural Network based Image Data hiding Scheme Chanchal M, Malathi P, Gireesh Kumar T	1245
218	Modeling, Simulation and Design of Luo Converter for DC Micro Grid Application A. Amudha, M. Siva Ramkumar, V. J. Vijayalakshmi, G. Emayavaramban, Viyathukattuva Mansoor, S. Divyapriya, P. Nagaveni	1250
219	Recurrent Neural Network approach for Data Prediction of a Chemical Process Plant N. Mohanasundaram	1257
220	A Controllability Algorithm to Minimize the Spreading chance of COVID-19 in Individual Networks Abeer Mahmood Hassan, Saad Talib Hasson	1262
221	Developing a Model to enhance the Quality of Health Informatics using Big Data Praveen Kumar Sadineni	1267

222	A study of Secure cryptographic based Hardware security module in a cloud environment J. Divya, S. Shivagami	1273
223	RDPC: Secure Cloud Storage with Deduplication Technique Patil Rashmi R, Vinaya Sarmalkar, Prajakta Pund, Yatin Gandhi, Vinit Khetani	1280
224	Privacy-Preserving and Public Auditing for Regenerating-Code-Based Cloud Storage Using Finger Print Authentication Divya Hadke, Rajesh Babu	1284
225	Design of Cost-effective Wearable Sensors with integrated Health Monitoring System Cecil C Nachiar, N. Ambika, R. Moulika, R. Poovendran	1289
226	An Efficient Sentiment Analysis on Feedback Assessment from Student to Provide Better Education D. Selvapandian, Thamba Meshach W, K. S. Suresh Babu, R. Dhanapal, Jebakumar Immanuel. D	1293
227	Twitter data in Emotional Analysis – A study Lokesh Singh, Prabhat Gupta, Rahul Katarya, PragyatJayvant	1301