

**2022 10th International Conference
on Emerging Trends in
Engineering and Technology –
Signal and Information Processing
(ICETET-SIP-22)**

**Nagpur, India
29 – 30 April 2022**



**IEEE Catalog Number: CFP2241E-POD
ISBN: 978-1-6654-6742-1**

**Copyright © 2022 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:	CFP2241E-POD
ISBN (Print-On-Demand):	978-1-6654-6742-1
ISBN (Online):	978-1-6654-6741-4
ISSN:	2157-0477

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

CURRAN ASSOCIATES INC.
proceedings
.com

Table of Contents

ASSISTIVE CANE FOR VISUALLY IMPAIRED PEOPLE	1
<i>Aniket Lande, Anuj Nandeshwar, Pankaj Chandankhede, Aniket Baseshankar, Ashwin Udapure and Arnob Sarkar</i>	
Sign Language To Categorical Text using Convolutional Neural Network.....	6
<i>Aishwarya Bhagwat, Poonam Gupta and Nivedita Kadam</i>	
A Novel IoT Based Sample Collection Method for Baby Meconium Aspiration Syndrome and Analyzing Suction Pressure of the System	12
<i>Sneha Sao, Suraj Dudhe and Harikumar Naidu</i>	
To design and develop LoRa based system for remote safety monitoring	17
<i>Shweta Ingle, Suresh Salankar and Shyam Prasad</i>	
Rayleigh Distribution-based Edge Detection in SAR Images	22
<i>Sourabh Paul, B. Saiteja, S. Rajasekharan, K. Pravallika and K. Prudhvi Reddy</i>	
Discriminative Learning Based Dual Channel Denoising Network For Removal of Noise from MR Images	27
<i>Sumit Tripathi and Dinesh Chandra Pandey</i>	
Diagnosis of Heart Stroke Using Feature Extraction and Sequential Learning Based Models.....	32
<i>Rakshit Agrawal, Mahendra Gourisaria and Sanjaya Panda</i>	
Review on Epilepsy Detection with Explainable Artificial Intelligence.....	39
<i>Prajakta Rathod and Shefali Naik</i>	
HEALTH MONITORING SYSTEM USING IOT	45
<i>Shruthi Gr, Sanjana Hombal, Shreya L, Sharanya G and Sanchitha Bs</i>	
Comparative Analysis of CNN Architectures for Maize Crop Disease	49
<i>Rakshit Agrawal, Vinayak Singh, Mahendra Gourisaria, Ashish Sharma and Himansu Das</i>	
Range Based Localization using Least Square Method in WSN	56
<i>Basavaraj K Madagouda and R. Sumathi</i>	
Reconfigurable Four Element Multiband MIMO Antenna for UWB Communications	60
<i>B Santhikiran and T Kavitha</i>	
Design of 2x2 MIMO Antenna for Sub-5G IoT Applications	66
<i>Aamna Ali Alblooshi and Jawad Yousaf</i>	
Survey of the Security Algorithms over Cloud Environment to Protect Information	71
<i>Mr. Rajneesh Kumar Nema, Aumreesh Kumar Saxena and Dr. Rajiv Srivastava</i>	
IOT BASED SMART AUTOMATED POULTRY FARM MANAGEMENT SYSTEM	77
<i>Bharati Ramteke and Snehlata Dongre</i>	
IIoT Based Automation In Doorstep Fuel Delivery System	81
<i>Harvindar Singh Gambhir, Dattatray Sawant and Abhishek Basu</i>	

Design of An IoT based Smart Plant Monitoring System	87
<i>Apeksha Rane, Dr. Bhushan Vidhale, Dr. Ganesh Khekare and Priyanka Hemant Kale</i>	
Home TechCare using IoT.....	92
<i>Mrunal Patil, Siddhika Patil, Vaishnavi Wagh, Sudarshan Pillai, Prasad Kulkarni and Sadhana Pai</i>	
Design and Development of Geofencing Based Attendance System for Mobile Application. .	98
<i>Rajeshwari Shinde, Asim Nilose and Pankaj Chandankhede</i>	
COLOR IMAGE RESTORATION FROM LOW RESOLUTION BASED ON MULTISCALE DECOMPOSITION.....	104
<i>Abinaya B, Hymlin Rose Sg, Manimegalai L and Naveenkumar M</i>	
Transfer Learning-Assisted Prognosis of Alzheimer’s Disease and Mild Cognitive Impairment Using Structural-MRI.....	110
<i>Yusera Khan, Baijnath Kaushik, Bilal Mir, Rahul Verma and Harsh Khandelwal</i>	
Chronic kidney disease prediction using different machine learning models	116
<i>Apoorva Datir, Nikita Bhore, Snehal Funde, Shweta Gawande and Pallavi Dhade</i>	
Application of Modified Restricted Boltzmann Machine (mRBM) for denoising of motion-artifacted MRI scans	122
<i>Vijay Tripathi, Manish Tibdewal and Ravi Mishra</i>	
Critical Component Identification in Hovercraft assembly Through FMEA.....	128
<i>Nakandhrakumar R. S, Ramakrishnan M, Dinesh Kannan K, Sidharthan K, Gopi Anand and Ramkumar Venkatasamy</i>	
PERFORMANCE IMPROVEMENT OF AODV UNDER WORM HOLE ATTACK.....	133
<i>Manish Chauhan, Vedant Shrikhande, Shivani Madelwar, Sharvari Umredkar, Kishor Kulat and Bhumika Neole</i>	
Design and Implementation of NVM Cell using Nanomechanical Cantilever Switch.....	139
<i>Keshav Gendepujari, Dinesh Rotake and Rasika Dhavse</i>	
Internet of Things Application: E-health data acquisition system and Smart agriculture ..	144
<i>Adarsh Ravi Mishra, Nitin Kumar Vishwakarma, Dr. Ragini Shukla and Dr. Ravi Mishra</i>	
Identification and prevention of Gray hole attack using IDS mechanism in MANET.....	149
<i>Manish Chauhan, Kruttika Karmarkar, Gargi Almelkar, Disha Borkar, Kishor Kulat and Bhumika Neole</i>	
Model Reference Adaptive System based Sensor less induction motor with Fuzzy Interface	155
<i>Sujeet Soni, Manish Khemariya and Anand Singh</i>	
Flexible MIMO Antennas for 5G Applications	161
<i>Neeta Kulkarni, Nilesh Bahadure, Prasenjeet Patil, Swagat Karve, Jayshri Kulkarni and Sneha kadam</i>	
Advanced IoT based parcel locking system	167
<i>Dhiraj K. Thote, Punit Fulzele and Swarali Bokade</i>	

Context Aware IoT Enabled Framework for Monitoring Parameters from Industrial Perspective.	173
<i>Umesh Hore and Dinkar Wakde</i>	
Smart Image Storage and Retrieval For Crime Scene Investigation.....	179
<i>Bhavesh Shinde, Disha Rane, Sidhesh Vaity and Priyanka Shingane</i>	
Loitering Detection In Home Surveillance System.....	185
<i>Shanmughapriya M, Gunasundari S and Bharathy S</i>	
Credit Card Fraud Detection using Logistic Regression and Decision Tree	191
<i>Shashank Goyal, Sourav Rawat and Abirami G</i>	
Design of Rotary Intersection at Deep Banglaw Chock	196
<i>Meera Talwekar and Ashwini Tenpe</i>	
Antigenicity of genomic epidemiology concerning viral evolution and vaccine efficacy for SARS-COV-2- A review.....	200
<i>Afshan Hassan and Devendra Prasad</i>	
Early Stage Detection of Multiple Sclerosis using FCNN.....	206
<i>Pallavi Abhale, Amol Lashkare and Amol Deshpande</i>	
COD prediction in water using Edge Artificial Intelligence.....	210
<i>Hemant Bhutada, Aleefia Khurshid, Manish Yadav, Nishant Yadav and Pankaj Baheti</i>	
Fabrication of Automated Knuckle Torque Testing Machine using PLC.....	215
<i>Ramkumar Venkatasamy, Indumathi S K, Janakiraman S, Nakandhrakumar R S, Deenadayalan G and Dhamodharan N Hindustan College Of Engineering And Technology Coimbatore</i>	
Design of a Model for Impact Assessment of Electric Vehicles on Day-To-Day Life & Environment.....	219
<i>Ajay Dutta and Ashwini Tenpe</i>	
AI based activity tracking and analysis system	225
<i>Shaket Dahiwal, Dhiraj Pagar, Revati Deval and Madhuri Chavan</i>	
Critical Analysis of Saturation Flow Rate and affecting parameters.....	229
<i>Sneha Rodke, Sujesh Ghodmare and Atul Deshmukh</i>	
IOT Based Health Care Monitoring and Facilitation.....	235
<i>Ashutosh Tiwari, Naresh Parate, Malay Khamari, Ayush Jaiswal, Poorvi Joshi and Pradnya Jadhav</i>	
Sustainable Transportation using Automated Highway System for Intercity Connectivity .	241
<i>Prajwal Mendhe, Sujesh Ghodmare, Abhijit Titarmare and Prafull Wadhav</i>	
Current Advancements in Cardiovascular Disease Management using Artificial Intelligence and Machine Learning Models: Current Scenario and Challenges	247
<i>Karan Bhadri, Niharika Karnik and Pankaj Dhatrak</i>	
Orthogonal Wavelet Construction Method for Electrocardiographic Signal Denoising.....	253
<i>Bandi Smitha and Srilatha B S</i>	

Enhancement in Dentistry using Machine Learning: A Systematic Review	259
<i>Arya Patil, Madhuri Bhalekar and Pankaj Dhatrak</i>	
TRAFFIC SIGNAL SYNCHRONIZATION SYSTEM FOR HIGHWAY CORRIDOR IN URBAN AREA	265
<i>Akanksha Nimburkar, Dr. Sujesh Ghodmare and Dr. Ashwini Tenpe</i>	
Autonomous Cost-Effective Robotic Exploration and Mapping for Disaster Reconnaissance	271
<i>Seenu N, Lokeshwaran Manohar, Nikhit Mathew, Kuppan Chetty and Ramya Mm</i>	
Design of an IoT based ensemble Machine Learning model for Fruit Classification and Quality Detection	277
<i>Pratiksha Nirale and Mangala Madankar</i>	
e-farmer: A study of how image processing tools may be used to detect plant disease	283
<i>Gauri Shankar Singh, Simpi Raj, Sonali Kumari, Priyambda Arya, Vijendra Singh and Shaveta Khepra</i>	
Design of a blockchain based WMSN model for secure & effective health monitoring system deployment	289
<i>Harshal Rahangdale and Prof. Nekita Chavhan</i>	
ACCELEROMETER BASED HAND GESTURE RECOGNITION AND CONTROL OF MOTOR POWERED TROLLEY	295
<i>Rajagopalaswamy M, Sivapalanirajan M, Vairamuthu D, Prince Joshua S, Vigneshkumar T and Willjuice Iruthayarajan M</i>	
Hybrid Approach to Enhance Security and Friendliness of Visual Secret Sharing Scheme ..	300
<i>Vishal Panchbhai and Dr. Suchita Varade</i>	
Development of Geriatric Rehab Device based on Gait Feedback for Arthritis Pain Management	306
<i>Kanchana Devanathan, Payal V. Katara, Soniya J and Dhavanisha S</i>	
A Compact Wideband Antenna with DGS for IoT Applications using LoRa Technology ..	310
<i>Rashmi Roges, Praveen Malik and Sandeep Sharma</i>	
Weather Prediction from Imbalanced Data Stream using 1D-Convolutional Neural Network	314
<i>Suja A Alex, Uttam Ghosh and Nazeeruddin Mohammad</i>	
Two Port Fractal-Shaped MIMO Antenna with Triple Band Rejection Capability for UWB Applications	320
<i>Madan Kumar Sharma, Pradnya A. Gajbhiye and Satya P. Singh</i>	
Design of a novel recurrent neural network design with augmented activation for classification of ECG signals	326
<i>Aroh Gahane and Chinnaiah Kotadi</i>	
BTFCNN: Design of a brain tumor classification model using fused convolutional neural networks	332
<i>Vikas Kushwaha and Priya Maidamwar</i>	

Glaucoma and Cataract Hybrid Classifier	338
<i>Sucheta Yamsaniwar, Surekha Tadse, Saikat Ranajit and Rutvik Walde</i>	
Brain Tumor detection from MRI scans using VGG- 19 networks	344
<i>Nalluri Siddaiah, C Vignesh, T Narendra, K Pujitha and D Madhu</i>	
SENTIMENTAL ANALYSIS FOR E-COMMERCE WEBSITE.....	350
<i>Anju A, Barath M, Maheshwaran R, Vignesh K and Kishor Kumar S R</i>	
An Innovative Safe Electrical Vehicle using Fuzzy Logic based Voice Control Device	354
<i>Suraj Dudhe, Hari Kumar Naidu and Pankaj Ramtekkar</i>	
A Review to Innovative a Green Electric vehicle for future.....	358
<i>Hari Kumar Naidu and Rachna Betala</i>	
A Review of MVDC Circuit Breaker Sub Station supply for Electrical Traction Vehicle ...	364
<i>Hari Kumar Naidu and Deepti Motwani</i>	
A Review of Electrical Boat Vehicle Floating Solar Generation for Energy Sustainability and Development	370
<i>Hari Kumar Naidu and Dipali Padwad</i>	
Uniform Distribution of Multiple Features for Remote Sensing Optical Image Matching...	376
<i>Sourabh Paul, Udaysankar D, Yaswanth Naidu and Yogeswara Reddy</i>	
A Review on Non-Communicable Disease Risk Factors and Their Trends	381
<i>Vishal M.Tiwari and Sanjay Kumar</i>	
Vector Model Based Information Retrieval System With Word Embedding Transformation	387
<i>Brundha J and Meera K. N</i>	
Arduino Based Portable ECG and PPG Signal Acquisition System	391
<i>Piyush Mahajan and Amit Kaul</i>	
A Comprehensive Study on Machine-Learning Algorithms for Intrusion Detection System.	397
<i>Swati Mirlekar and Dr. Komal Prasad Kanojia</i>	
Sensor Based Vibration Analysis of Motor Using MATLAB Software	403
<i>Vaishnavi Khandelwal, Pankaj Ramtekkar, Mohit Chauhan, Yash Bhute and Rajratan Kouthekar</i>	
Correlation Between Renal Tracer Parameters Derived for Recognition of Renal Obstruction with ^{99m} Tc-DTPA Scintigraphy	407
<i>Pradnya Gokhale and Dr.B.R. Patil</i>	
Nadi Signal Analysis: A Review.....	413
<i>Kalyani Akant, Vidula Akant and Dharmaveer Choudhari</i>	
Effective Breast Cancer Classification Using SDNN Based E-Health Care Services Framework.....	418
<i>Anji Reddy Vaka, Badal Soni and R Murugan</i>	
Security of E-healthcare data using DWT-SVD based Hybrid watermarking	424
<i>Kumari Suniti Singh, Pushpanjali Singh and Harsh Vikram Singh</i>	

Power and Delay Efficient Three-Input XOR/XNOR With Systematic Cell Design Methodology	430
<i>Prof Leela Bitla, Prof.Rupali Vairagade, Vaibhav Ghule and Ujjawal Sadani</i>	
A Proficient Approach to Detect Osteosarcoma Through Deep Learning	435
<i>Mejbah Ahammad, Mohammad Joynul Abedin, Md. Asiqur Rahman Khan, Md. Abdul Alim, Mohammad Abu Tareq Rony, K.M. Rashedul Alam, D. S. A. Ashiqur Reza and Iktear Uddin</i>	
A Systematic review on Cybersecurity : Models, Threats and Solutions	441
<i>Ankur Mangla, Vishal Gupta, Surinder Pal Singh and Charanjit Singh</i>	
SENTIMENT ANALYSIS USING K MEANS CLUSTERING ON MICROBLOGGING DATA FOCUSED ON ONLY THE IMPORTANT SENTIMENTS	447
<i>Agashini V Kumar and Meera K. N.</i>	
Gender Based Access Control System	452
<i>Rajendra Dube</i>	
A Three Stage Ku-Band GaN HEMT Power Amplifier	456
<i>Ravinder Kumar and Sukwinder Singh</i>	
Analysis of Different Encryption Techniques used in Watermarking Algorithm for the Security of Medical Image	460
<i>Namita Pulgam and Subhash Shinde</i>	
The Novel Approach of QR Code detection with Smart Glasses	466
<i>Shreesh Tiwari, Prajwal Girade, Bhavesh Khobe, Advait Rambhajani, Sampada Wazalwar and Milind Khanapurkar</i>	
Automated Framework for Web Content Security Through Content Management System .	471
<i>Dr.Ajay Kumar Phulre, Shreyas Pagare and Ankit Chakrawati</i>	
Aviation industry's dynamic pricing model (Revenue Management System) using Data Science	475
<i>Savita Lohiya, S Ananthaselvi A Shankaran, Arfah Upade and Shweta Pai</i>	
Research and Analysis on Voice Based System with Machine Learning	481
<i>Gopal Patil and Vidya Dhamdhare</i>	
Design and Analysis of Low Power CMOS SRAM Cells 7T and 9T	485
<i>Vibhash Choudhary and Dharmendra Singh Yadav</i>	
Linearity and Analog Performance Analysis of Double Gate Tunnel FET With Source Pocket	490
<i>Prajwal Roat, Prabhat Singh and Dharmendra Singh Yadav</i>	
Cloud based psychopathology Companion	496
<i>Yuvraj Kadale, Arush Koundal, Mohit Mukamia, Amandeep Singh and Dharmendra Singh Yadav</i>	
Punjabi Speech Emotion Recognition using Prosodic, Spectral and Wavelet Features	501
<i>Chaitanya Singla and Sukhdev Singh</i>	
Review on Ground Control Station Design for Remotely Piloted Aircraft System	507
<i>Sanghamitra Badole, Swapna Choudhary, Abhijit Titarmare and Pranav Khergade</i>	

Image Security Barrier (ISB): Hide valuable information in image using machine learning .	513
<i>Pranay Maske, Kunal Pardhi, Shubham Hatzade, Rakesh Sharma and Sampada Wazalwar</i>	
Secure Transaction Approach in Health Care Using BlockChain	519
<i>Rohini A, Saragadam Sridhar and Sujatha P</i>	
3D Networking and Collaborative Environment for Online Education	524
<i>Yash Prakash Gupta, Amit Chawla, Tanuja Pal, Myakala Phanindra Reddy and Dr. Dharmendra Singh Yadav</i>	
A survey on Power Allocation in PD-NOMA for 5G Wireless Communication Systems....	529
<i>Prasheel Thakre and Sanjay Pokle</i>	
Internet of Thing and Machine Learning Approach for Agricultural Application: A Review	534
<i>Pranita Kolhe, Kamlesh Kalbande and Atul Deshmukh</i>	
Deep Learning based Surveillance system for Tracking unknown Faces and Movements....	540
<i>Asha Nandi, Vyomender Mehta, Sandeep Kumar Singh, Rani Jairaj and Dhiraj Charan</i>	
Smart Electronic Lock System using LoRa Technology	545
<i>Akshit Yadav, Angel Yadav, Faraz Khana Rana, Aditya Sachan, Geetanjali Raj and Priyanka Bhardwaj</i>	
Machine learning based Distributed Dynamic Spectrum Access	550
<i>Sonia and Sandeep Kumar Singh</i>	
A 3.5GHz Power Amplifier Design.....	556
<i>Kumar Saurabh and Sukwinder Singh</i>	
Design of Multistage X Band Power Amplifier	560
<i>Parul Rattanpal and Sukwinder Singh</i>	
WSN based IoT applications: A Review.....	564
<i>Anuradha Gupta, Tarun Gulati and Amit Kumar Bindal</i>	
Implementation of Soldier Tracking and Health Monitoring System	570
<i>Laxman Thakre, Nayan Patil, Prashant Kapse and Piyush Potbhare</i>	
Performance Evaluation Of Emerging Semiconductor Devices For Low Power Applications: A Review	575
<i>Mahalaxmi Palinje and Sanjeet Kumar Sinha</i>	
A simple and small multiband reconfigurable slot antenna using an inset feed.....	581
<i>Indra Bhooshan Sharma, M.M. SHARMA, HIMANSHU JATWA and RENU AGRAWAL</i>	
IOT based Home Automation with Fault Monitoring	585
<i>Gauri Ghadge and Pragati Korde</i>	
IL2ATL: Design of a high efficiency load balancing model using augmented deep incremental transfer learning	591
<i>Supriya Sawwashere, Dr.Asha Ambhaikar and Dr.Latesh Malik</i>	

ATQMB: Design of an augmented trust enabled QoS aware MAC model with intelligent blockchain sharding	597
<i>Ashutosh Lanjewar, Dr.Sunil Kumar and Dr.Latesh Malik</i>	
Exploiting spatiotemporal inconsistencies to detect deepfake videos in the wild	603
<i>Atharva Khedkar, Atharva Peshkar, Ashlesha Nagdive, Mahendra Gaikwad and Sudeep Baudha</i>	
METRO FOLLOWS AN OPTIMIZED SPEED TRAJECTORY TO SAVE ENERGY	609
<i>Dhiraj Yadav, Bhalchandra Khode and Sujesh Ghodmare</i>	
Disease Prediction using Machine Learning	615
<i>Pallavi Basuri, Nidhi Kosarkar, Poonam Karamore, Prachi Gawali, Pradnya Badole and Pranjali Jumle</i>	
Arthritis Detection Using Thermography and Artificial Intelligence	619
<i>Rozina Naz and Dr.Gopal Sakarkar</i>	
A Review Paper on Data Sensing and Acquisition Complexity and Accuracy in Green House Monitoring Systems	625
<i>Dr. Nikhil Wyawahare, Mr. Pratik Malewar, Ms. Rutuja Kadu, Rasika Kakde and Rahul Agrawal</i>	
Design and development of MEMS based Piezoelectric Energy Harvester	631
<i>Dr S Srinivasulu Raju, M. Srikanth M, Dr. T. Niranjan T, P. Akhil Sai and S.K. Mohinuddin K</i>	
THE SCRUTINY OF AI, ML, BIG DATA,DEEP LEARNING AND OTHER TECHNICAL VOWS AND CALLS IN NEPHROLOGY.....	637
<i>Mansi Sharma and Manpreet Singh Bajwa</i>	
Performance Evaluation of Machine Learning and Deep Learning Models for Temperature Prediction in Poultry Farming	641
<i>Vikas Goyal, Ajay Yadav and Rahul Mukherjee</i>	
Novel Approach of Diagnosing Significant Metrics of Load Balancing using CloudSim	647
<i>Bidush Kumar Sahoo, Anita Sardana, Vikas Solanki, Sunil Gupta and Kamal Saluja</i>	
A REVIEW ON DEEP LEARNING METHODS AND CT SCAN APPROACHES FOR COVID-19 DETECTION	653
<i>Swati Paraskar, Arfiya Pathan, Rina Parteki, Rucha Jichkar, Dr.Laxman Thakre and Trushna Deotale</i>	
Black Hole Detection and Prevention Using Digital Signature and SEP in MANET	659
<i>Dr. Sunil Gupta, Dr. Mohammad Shahid, Dr. Ankur Goyal, Dr. Rakesh Kumar Saxena and Kamal Saluja</i>	
Design and Implementation of Multipurpose Robot for Covid-19 Ward	664
<i>Chetan Kale, Milind Khanapurkar and Umesh Kubde</i>	
EMPLOYEE ALERTING SYSTEM USING REAL TIME DROWSINESS DETECTION .	670
<i>Abhishek Gadde, Swapna Choudhari, Abhinandan Gorde, Aditya Bopte, Nidhi Kagate and Aashay Nevatia</i>	

Analysis & Design of Technical Feasibility of Electric Cooking for Scalable India..... 675
Prema Daigavane and Anjali Moraskar