

2022 IEEE 4th International Conference on Cybernetics, Cognition and Machine Learning Applications (ICCCMLA 2022)

**Goa, India
8-9 October 2022**



**IEEE Catalog Number: CFP22CU5-POD
ISBN: 978-1-6654-6247-1**

**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:	CFP22CU5-POD
ISBN (Print-On-Demand):	978-1-6654-6247-1
ISBN (Online):	978-1-6654-6246-4

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

Decisive Analysis of Fixed Power Allocation Coefficients in a PD-NOMA Network	1
<i>Saurabh Srivastava, Prajna Parimita Dash and Sanjay Kumar</i>	
A Review on Torque and Current Ripple Minimization Techniques in a BLDC Motor Drive for EV Applications	7
<i>Amit Jadhav and Mahadev Patil</i>	
City-wide Spatio-temporal Effect on AQI	13
<i>Pritisha Sarkar, Munshi Yusuf Alam and Mousumi Saha</i>	
Medium term Solar Power Prediction using stacked LSTM based deep learning Technique	19
<i>Ajaya Kumar Parida, Deepak Kumar, Rashmi Ranjan Sahoo and Bunil Kumar Balabantaray</i>	
Sentiment Analysis of Covid-19 Tweets using Twitter Database – A Global Scenario	27
<i>Tejaswini Zope and Dr.Kannan Rajeswari</i>	
Artificial Intelligence towards Parkinson’s disease Diagnosis: A systematic Review of Contemporary Literature	31
<i>C Hrishikesava Reddy and Kanchana M</i>	
Blockchain based medical image processing Mechanism	38
<i>Rajiv Kumar Berwer, Sanjeev Indora and Dinesh Kumar Atal</i>	
Parkinson’s disease Classification from Speech Signal Parameters using Deep Neural Network	44
<i>Deepa P and Rashmita Khilar</i>	
Meditation for Happy and Healthy Life: A Quantitative Assessment using Heart Rate Variability using ECG	49
<i>Akhilesh Kumar Sharma, Shamik Tiwari, Devesh Srivastava, Deevesh Chaudhary and Santosh Kumar Vishwakarma</i>	
Automatic Question Classifier	53
<i>Neha Patil, Ojas Kulkarni, Vineeta Bhujle, Aniket Joshi, Mansi Kambli and Khushi Khanchandani</i>	
Privacy and Data Control on Social Networks using Deep Learning	59
<i>Amudalapally Parimala and Y Vijayalata</i>	
Averting Frustration in Geriatric Patients through Identification, 3D Mapping and Navigation Using Machine Learning	65
<i>Alekha Malhotra, Stuti Bhatia and Reetu Jain</i>	
Text Augmentation based Imbalance Learning for Unstructured Text Data	73
<i>Praveen Singh Thakur, Mahipal Jadeja and Satyendra Singh Chouhan</i>	
Detection and prevention of Sybil attack in VANET using modified ACO	78
<i>Syed Mohd Faisal, Bineet Kumar Gupta and Taskeen Zaidi</i>	
Forensic Evidence Collection From Windows Host Using Python Based Tool	85
<i>Amit Hariyani, Jaimin Undavia, Nilay Vaidya and Atul Patel</i>	

Recent Advancements in Finger Vein Biometrics: A Review	91
<i>Kiranjit Pattnaik, Bhabani Shankar Prasad Mishra and Partha Pratim Sarangi</i>	
CNN-LSTM-based IDS on Precision Farming for IIoT data	99
<i>Prince Rajak, Rajesh Doriya and Jaykumar Lachure</i>	
Advancements in Simulator Technologies for Power Plant Operator Training.....	104
<i>Dr. K.V. Vidyanandan</i>	
Advancement In Public Distribution System.....	112
<i>K. Salooma Ali, K. Muhammad Mufeed, P. Muhammad Shameem, P. K. Ismail, N. Muhammed Rashid and M. Salmanul Faris</i>	
Real Time Gesture Detection Using Convolutional Neural Network	118
<i>Rameez Shamalik and Sanjay Koli</i>	
K-Nearest Neighbour (KNN) Algorithm based Cooperative Spectrum Sensing in Cognitive Radio Networks.....	122
<i>S.Lakshmikantha Reddy and Dr Meena M</i>	
Improving Effectiveness of Parallel Computing with Smart Cache Utilization for Energy Saving and Temperature Reduction In Chip Multiprocessors.....	128
<i>Ashwini Kulkarni and S. P. Mahajan</i>	
HTML Code Generation from Website Images and Sketches using Deep Learning-Based Encoder-Decoder Model.....	133
<i>Yashaswini D, Sneha Kashyap and Nikhil Kumar</i>	
An Overview of Machine Learning Techniques for Evaluation of Pavement Condition	139
<i>Mrs Aradhana Chavan, Dr. Sunil Pimplikar and Ms. Ashlesha Deshmukh</i>	
Automated defence surveillance using tranquilizer	144
<i>Swaroop Somaling Tubaki, Sachin Gurulingayya Hiremath, Arpita A Kanaganni, Anularmi S Khanaganni and Salma S Shahpur</i>	
Face recognition using Deep Neural Network and Support Based Anchor Boxes Methods in video frames.....	150
<i>Kande Archana, Dr V Kamakshi Prasad and Dr M Ashok</i>	
A Simple User-friendly Android Application for Oxygen and Blood Pressure Measurement	158
<i>Srujan Cheemakurthi, Jahnabi Chakka, Sagar M. Parida, V. N. Siva Praneeth, Kinjal and Kumar Debasis</i>	
Virtual Voice assistant in PYTHON (FRIDAY)	164
<i>Shailaja Uke, Devansh Lathiya, Tanmay Lautawar, Hrishikesh Lokhande, Aditya Langhe, Pranali Likhitar and Durva Lohar</i>	
Calculating and Comparing the Weighted and Unweighted Water Quality Indices for Cauvery River Banks based on Accuracy	168
<i>Karpagam V, Christy S and Sheela Evangelin S.N</i>	
Prediction of cardiovascular diseases using neural networks and machine learning	174
<i>Jegadeesan R, Karpagam T and Jayashree K</i>	

Amelioration of Robust Cascade Controller For Load Frequency Control Of A Standalone Microgrid	179
<i>Lokasree B S</i>	
Activity Based Remote Health Monitoring System.....	184
<i>Shivakumar Muruges, Jesintha Bala Chandrasekar, Shivakumar Buyya and Dr. S. Umamaheswaran</i>	
A Machine Learning Model to Identify Best Blood Plasma Proteins for Early Detection of Alzheimer’s Disease.....	190
<i>Bharani Prabhakar and M S Bhargavi</i>	
Behavioral Analysis of ROS motion planners integrated with Robotics Middleware Framework (RMF).....	196
<i>Mayank Deshpande and Kamalanathan N</i>	
Quantum Computing and Quantum Machine Learning Classification – A survey	200
<i>Kuppusamy P, Yaswanth Kumar Nnvs, Jyotsna Dontireddy and Celestine Iwendi</i>	
Regression Analysis of Marine Water Quality Indicators	205
<i>Karuppanan Komathy</i>	
Neural Network Based Reinforcement Learning for Maximum Power Extraction of Wind Energy.....	210
<i>Nitin Sivakumar, Abhinandan Routray, Neethu Sajeev, Febin Raju and Gaurav Dhiman</i>	
Triple Band Printed Wearable Antenna for Remote Healthcare Monitoring Device	216
<i>Divya Nune, Sai Neha P, Shivani Sindhe, Navanth Reddy P, Dawn Sathvik P and Krishna Sahith P</i>	
Detecting Flooding, Impersonation and Injection Attacks on AWID Dataset using ML based Methods.....	221
<i>Mayank Agarwal</i>	
EEG-Based integrated solution for drivers and safe transportation.....	227
<i>Hossam A. Gabbar, Youssef Ahmed, John Gaber and Jing Ren</i>	
A Novel Approach to Quantify and Compute Gait Analysis Parameters of Quadrupeds ...	233
<i>Arnav Kejriwal, Reetu Jain and Vikramjeet Singh</i>	
Prediction of Autism Spectrum Disorder using Random Forest Classifier in Adults.....	242
<i>Kanchana A and Rashmita Khilar</i>	
Design And Development of Activated Carbon Based Solar Air Purifier	250
<i>Reshma Eldho, Reshma Eldho and Reshma Eldho</i>	
IoT Enabled Smart Fleet Management	256
<i>Punith M S, M Nithya and Deepa K</i>	
Development of Advanced Alerting System using Arduino interfaced with ESP32 CAM...	261
<i>Aditya Reddy Lellapati, Bharath Kumar Pidugu, Madhu Sudhan Reddy Rangari, Prasad Acharya Gobinda and Jayaprakasan Veeragamoorthi</i>	
Homomorphic Encryption Approach for String Concatenation	267
<i>Rajashree S, Vineetha B, Ami mehta and Prasad B Honnavalli Honnavalli</i>	

Model Predictive Control Based Power Management Strategy for Hybrid Electric Vehicles	273
<i>Anubhav Routray, Abhinandan Routray and Gaurav Dhiman</i>	
Feature Extraction and Classification of Objects Using ML Model for FMCW Radar Signal	280
<i>Sivakamasundari G, Jaydip Jani and Vivek S</i>	
A Deep Learning Based Model to Predict PM10 Concentration	286
<i>Deepti Shakya, Vishal Deshpande and Mayank Agarwal</i>	
Visual Wrench Reference and Feedback for Robot-Assisted Minimally Invasive Surgery	292
<i>Bimmi Bharadvaj, Dwarakanath T A, Gaurav Bhutani and Hemanta Swain</i>	
Pramanik - Cloud Based Certificate Repository	297
<i>Anoop Kumar Pandey, Balaji Rajendran, B S Bindhumadhava and S D Sudarsan</i>	
Optimized Deep Learning technique for Brain Tumor Segmenting, Contouring and Detection	302
<i>Aranyak Banerjee and Dinesh Kumar Atal</i>	
Understanding Query Intention in Search Queries of Learners in Blended Learning Environments	308
<i>N Vivekananthamoorthy and S Sankar</i>	
Road Crash Data Analysis and Prediction Using Machine Learning Algorithms	316
<i>Ashwini Bagga, Sumit Srivastava and Rajveer Singh Shekhawat</i>	
Load forecast anomaly detection under cyber attacks using a novel approach	323
<i>Anshul Agarwal</i>	
Statistical Scrutiny of the Prediction Capability of Different Time Series Machine Learning Models in Forecasting the Cryptocurrency Prices	329
<i>Carl Dinshaw, Reetu Jain and Dr. Syed Abou Iltaf Hussain</i>	
ML-MT: A Study of e-Health Application Framework by Machine Learning Techniques	337
<i>Krishna Mridha</i>	
Detection of skin cancer using Artificial intelligence & machine learning concepts	343
<i>Tc Manjunath</i>	
Composite Filtering and Morphology for Optic Disc Segmentation from Retinal Images	348
<i>Y Aruna Suhasini</i>	
Weighted Matrix Mapped CNN model for Optimizing the Sentiment Prediction	355
<i>Kushal Devgun</i>	
Assistive System for the Visually Impaired using Multiple Cameras and Sensors	363
<i>Harish Akula, G Durgaprasad Reddy and Morarjee Kolla</i>	
An Approach for Transparent Logistic Solution for Life Saving Medicines and Essential Goods using IoT and Blockchain	370
<i>Agneesh Dasgupta and Shyamapada Mukherjee</i>	
Energy Harvesting using ZnO Nanorods for Wearable Devices	376
<i>Geetha P</i>	

UPS power measurement and prediction towards video surveillance systems	381
<i>Lakshmi Shrinivasan and Digvijay Samje</i>	
Spatial Feature Extraction using Pretrained Convolutional Neural network for Hyperspectral Image Classification	386
<i>Ram Nivas Giri, Rekh Ram Janghel, Himanshu Govil and Saroj Kumar Pandey</i>	
Performance Analysis of Deep Neural Network and LSTM models for Secure Network Intrusion Detection System.....	390
<i>Kavitha Ravindran</i>	
Cuckoo Search Optimization and Long-Term Memory-based Stock Price Prediction Model with Improved Classification Performance.....	397
<i>Swathi T</i>	
Matrix Decomposition based Digital Video Forgery Detection	403
<i>Priyanka P, Rajesh O K and Baburaj M</i>	
Optimized Weighted Strategy for Co-operative Decision at Fusion Centre in CRN	407
<i>Nitin Dhaigude and Dr.Rajendrakumar Patil</i>	
Digital Dashboard for Electric Vehicles	413
<i>Sumith G S, Rishabh Bhatt, Lakshmi Shrinivasan, Yash Bagri and Shrinivas S V</i>	
Accident Rescuing System for Vehicles in Road Traffic: A Smart Phone Application	419
<i>Goutam Kumar Sahoo, Harshit Srivastava, U. Nirmal Chathura Unagalle, S. Arachchige Pasindu Mihiran, K. Dhananjani Jayarukshi, Santos Kumar Das and Poonam Singh</i>	
Detecting Diabetes Mellitus from Tongue Image Hybrid Features and Neural Netowrk Classifier	425
<i>Umashankar Ganesan, Hari Krishnan G, Kumara Swamy I, Edwin Paul N E and Anitha S</i>	
A study on Deep Learning based Soil Classification.....	428
<i>Valapala Prabhavathi and P Kuppusamy</i>	
Development of Plant-leaf disease classification model using Convolutional Neural Network	434
<i>Ravi Shanker, Diwakar Sharma and Mahua Bhattacharya</i>	
Pix2Pix GAN Image Synthesis To Detect Electric Vehicle License Plate	439
<i>Kalpana A and Anju John</i>	
Fingerprint de-blurring and Liveness Detection using FDeblur-GAN and Deep Learning Techniques	444
<i>Devyansh Agrawal, Manisha Belagal, Mehar Soudagar, Priyanka Pardeshi and Neha Tarannum Pendari</i>	
Comparative study on Design of AI-based Communication Protocol for VANET	451
<i>Prerna Patankar, Dr. Sanjay Dorle, Dr. Nikhil Wyawahare and Dr. Laxman P Thakre</i>	
Writer Identification using Handwriting Samples	456
<i>Spurthi Bhat, Rutuja Bhirud, Vaishnavi Bhokare and Pushkar Joglekar</i>	

Document Text Analysis and Recognition of Handwritten Telugu Scripts	462
<i>Ashlin Deepa R N, Y Vijayalata and Atul Negi</i>	
Evaluation of Dimensionality Reduction of Hyperspectral Images for Spatial-Spectral Classification Framework	467
<i>Neelam Agrawal and Himanshu Govil</i>	
News Popularity Prediction with Machine Learning	474
<i>Daniel Hosseini, Kanika Sood and Vaishnavi Bacha</i>	
WASABI Contextual BOT	481
<i>Rahul Agrawal, Saurabh Kumar, Shubham Kumar, Nitesh Goyal and Shashank Sinha</i>	
Design and Development of Autonomous Driving Car Using Nvidia Jetson Nano Developer Kit	486
<i>Manjunath R Kounte, Harshavardhan V S, Dhruv S, Aswini Shri C V and Ayushi Kumari</i>	
Existing approaches in Ear biometrics	490
<i>Gurleenpreet Kaur</i>	
Smart Agricultural System using Internet of Things	497
<i>Gouse Basha Shaik, Navya Durgam and Tharun Bhupathi</i>	
Identifying similar sentences when processed by Apache Spark	504
<i>R.S.V. Mukhesh and Aashna Soni</i>	
Implementation of AI/ML for Human Emotion Detection using Facial Recognition	511
<i>Anuj Kumar Goel, Aman Jain, Chirag Saini, Ashutosh Mishra, Rupam Das and Akash Deep</i>	
Aero Drums - Augmented Virtual Drums	516
<i>Dishant Zaveri, Sanika Ardekar, Vismay Vora, Russel Lobo, Rajvi Parekh and Aniket Kore</i>	
Smart Transportation- A Futuristic Intelligent Mobility Approach towards Smarter Cities	521
<i>Akhilesh Kumar Singh and Dr. Damodar Reddy Edla</i>	
Implementation of Smart Water tank Control System using Mozilla Web Things	525
<i>Ishan Acharyya, Maradana Gyaneshwar Rao, Karuna M., Harsha Vardhan Patnana, Alekya Immidisetty and Tulasi Singampalli</i>	
A Solution for Prediction and Tracking of Alzheimer Disease using Secure and Energy Efficient Internet-of-Things	529
<i>Reshma Jakabal and Dr. Nagaraja G S</i>	
GPT-K : A GPT based model for generation of text in Kannada	534
<i>Manodnya K H and Animesh Giri</i>	
A Hybrid Approach based on Metaheuristics and Machine Learning for Tomato Plant Leaf Disease Classification	540
<i>Jagatheeswari M and Y.V Raman Rao</i>	
Efficient Data Transmission Protocol using Post-Computation Selection Combining Scheme for reliable, low-latency Wireless Network	546
<i>Yaka Bulu</i>	

Design & Development of a Robust – The Health Wealth App.....	N/A
<i>T C Manjunath and Pavithra G</i>	
Performance Comparison of Machine Learning based Multi-Antenna Cooperative Spectrum Sensing algorithms under Multi-Path Fading Scenario.....	559
<i>Dimpal Janu, Kuldeep Singh and Sandeep Kumar</i>	