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| Intracranial Hemorrhage Grading using Novel ConceptionNet  | Shanu N  |
| Efficient Wearable Health Monitoring System using Cortex M0 Based SoC  | Gagandeep None; Deepank Grover; Tarun Sharma; Keshav Goel; Swapnil Bansal; Sidhartha Sankar; Sujay Deb |
| Automated Detection of Heart Murmurs From the PCG Signal Using Stationary Wavelet Transform  | Samarjeet Das; Samarendra Dandapat   |
| Deep Learning based Object Detection Algorithm for the Detection of Dental Diseases and Differential Treatments  | Athira Thulaseedharan; Lal Priya P S   |
| A Muscle Fiber Conduction Velocity Estimator Using Surface Electromyography Signals Acquired From Vastus Lateralis   | Remya R Nair; G Venugopal  |
| Comparative Analysis of Protein Complex Identification Methods Using Topological and Biological Information  | Saranya K R; Vimina E R  |
| Spatiotemporal Prediction of Chickenpox Cases using Graph Attention Network  | Nitisha Aggarwal; Ishita Pundir; Unmesh Shukla; Sanjeev Singh  |
| Automated Detection of Common Maternal Fetal Ultrasound Planes Using Deep Feature Fusion   | Thunakala Bala Krishna; Priyanka Kokil   |
| A Matching Energy based approach in wavelet domain to distinguish hyper-responsive behavior in Autism Spectrum Disorders                                     | Priyalakshmi Sheela; Subha D Puthankattil  |
| Enhancement of Diagnostic Information in T1-weighted Contrast Enhanced MRI using Deep Back-Projection based Super-Resolution                                 | Sumit Datta; Bhabesh Deka; Samarendra Dandapat; Sushant Kumar; Arnab Majumder                          |
| Voting Ensemble SVM Model for Deep CNN Based Breast Histopathology Classification  | Jyoti Chowdhary; Praveen Sankaran  |
| Diabetic Retinopathy Classification Based on Segmented Retinal Vasculature of Fundus Images Using Attention U-NET  | Fousiya T T; Dr. Ahammed Muneer K V  |
| Automated Classification of Pathological Speech Signals  | Deepak Kumar; Udit Satija; Preetam Kumar   |
| An Explainable AI approach towards Epileptic Seizure Detection   | Neeta Hemant Chapatwala; Chirag Paunwala; Poojan A Dalal   |
| LungNodNet-The CNN architecture for Detection and Classification of Lung Nodules in Pulmonary CT Images  | Humera Ms Shaziya; Shyamala Prof Kattula   |
| Acoustic Signal Based Diagnosis of Neurodegenerative Parkinson's Disease through Machine Learning Approach: A Review   | Shibina V; Dr.T M Thasleema  |
| An Effective Heart Valve Disorder Classification Technique Using Phonocardiograms  | Rishal S P; Udit Satija  |
| Discrete Cosine Transform based Laplacian Phase Unwrapping for Phase Image application   | Shradha Verma; Dr. Tripti Goel; R Murugan  |
| U-NET Architecture for Liver Segmentation using Multi Model Scans  | Tripty Singh; Ayush Kumar  |
| Learning Brain Computer Interface model for Amyotrophic Lateral Sclerosis (ALS) people using Random Forest – Linear Discriminant Analysis (RF-LDA) Algorithm | Arun Kumar S; Dr. Anil Kannur; Akash C K; Venkatanath Koushik P S; Kushal S; Shaik Anwar C             |

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| An IoT-Enabled Stress Detection Scheme Using Facial Expression  | Hindu Angalakuditi; Biswajit R Bhowmik   |
| Robust Design Optimization of Powered Air Purifying Respirator System by Iterative Process  | Deepu D Sasi; Ayyappan Ajan  |
| Emotion Estimation Using EEG with Deep learning Networks  | Marrapu Vynatheya; Subha D Puthankattil  |
| Upper Gastrointestinal Endoscopic Imaging Using Vine Robots   | Rishi Manoj; Athira H; Anudev Asokan; Aneesha A R; Ken Thomas Abraham; Darsana G |
| An automated system for sleep staging using EEG brain signals based on a machine learning approach  | Santosh Kumar Satapathy; Hari Kishan Kondaveeti; Sreeja S R                      |
| Multiscale Kernel Residual Convolutional Neural Network to Detect Heart Valve Diseases  | Samarjeet Das; Samarendra Dandapat   |
| Brain Computer Interface for Intelligent Prosthesis   | Sreehari N; Abhijith P; Mukund C Menon; Rihaz Zahir; Manojkumar P; Dr Jessy John |
| Physical Activity Classification with Smartphone based Accelerometer, Gyroscope and Device Motion for Personal Diabetes Healthcare Management | Deepjyoti Kalita; Mirza Khalid Baig  |
| Significance of Pre-Processing Phase and Dimensionality Reduction in EEG-based Dyslexia Diagnosis with Novel Features                         | Shankar Parmar; Chirag Paunwala  |
| A Multi-Scale Residual Neural Network for ECG Based Person Identification   | Debasish Jyotishi; Samarendra Dandapat   |
| Soft attention with Convolutional Neural Network for Grading Diabetic Retinopathy   | K Ashwini; Ratnakar Dash   |
| A Machine Learning Framework for Automatic Diagnosis of Schizophrenia Using EEG Signals   | Rakesh Ranjan; Bikash Chandra Sahana   |
| Multimodal Simultaneous Amperometry and Electrochemical Impedance Spectroscopy measurement for Biosensing Applications                        | Hrishita Sharma; Deepjyoti Kalita; Mirza Khalid Baig                             |
| Weighted Vector Visibility based Graph Signal Processing (WVV-GSP) for Neural Decoding of Motor Imagery EEG signals                           | Priyanka Mathur; Vijay Kumar Chakka; Vidhi Garg                                  |

## Track: Next Generation Computing & Applications

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| Sequential Memory Modelling for Video Captioning   | Puttaraja H; Chidambara Nayaka; Manikesh S; Nithin Sharma; Anand Kumar M   |
| Identifying Similar Questions in the Medical Domain Using a Fine-tuned Siamese-BERT Model                                  | Alimurtaza Mustafa Merchant; Naveen Shenoy; Abhinav Bharali; Anand Kumar M   |
| Fast Classification for Identification of Vehicles on the Road from Audio Data of Pedestrian's Mobile Phone                | Pravin Vitthal Kakade; Lakshi Prosad Roy   |
| Multivariate Water Quality Forecasting of River Ganga Using VAR-LSTM based Hybrid Model                                    | Mogarala Tejoyadav; Rashmiranjan Nayak; Umesh Chandra Pati   |
| Indian Legal Text Summarization: A Text Normalization-based Approach   | Satyajit Ghosh; Mousumi Dutta; Tanaya Das  |
| Autonomous Navigation of Lab Assisting Mobile Robot Using SLAM   | Chandni S Vijay; Rajesh Kannan   |
| Autonomous Fertilizer Spraying Mobile Robot  | Abhiram Reghu; Rajesh Kannan   |
| Detection and Classification of Banana leaf diseases using Machine Learning and Deep Learning Algorithms                   | Vidhya N P; Priya R  |
| Basil Leaf Diseases Detection using Deep Learning architectures  | Kavitha R  |
| On Improving Performance of NeMo ASR system for Indian Accent English  | Sourav Chattopadhyay; Junaid Hamid Bhat; Sowmya Rasipuram; Aditi Debsharma; Anutosh Maitra   |
| Computational Framework for Node Placement and Bandwidth Optimization in Dynamic Fog Computing Environments                | Sheela S; Dharamendra Chouhan; Dilip S M Kumar   |
| Fruit Healthiness Detection and Filtering System   | Venkatesh Venkatesh; Siddhanth Hegde; Shravan Tandel   |
| A Fast and Effective Machine Learning Approach for Road Cracks Classification  | Rajdeep Dr. Chatterjee; Ankita Chatterjee; Soham Roy; Mahendra Kumar Gourisaria  |
| CarParkingVQA: Visual Question Answering Application on Car Parking Occupancy Detection                                    | Vikash Hela; Lubna A; Saidalavi Kalady   |
| A user-oriented multi-input Sentiment Analysis and Feedback System for mental state awareness necessitated due to COVID-19 | Minakshee Dashrath Narayankar; Ishita Tambat; Nisha Rajesh Gharpure; Suja Jayachandran   |
| Real Time Recording and Monitoring of Wild Animal Movements  | Joel John Kandathil; Aliya Ashraf; James Babu; Joffin Francis; Jerin Thomas  |
| Design of Drowning Prevention Scheme with Efficient Routing Protocol for Underwater Wireless Sensor Network                | Indrajit Banerjee; Shilpa De; Arnab Goswami  |
| A Duplex Method for Prediction of Concrete Strength Using Dimensionality Reduction   | Mahendra Kumar Gourisaria; Ayush V. Patel; Vinayak Singh; Rajdeep Dr. Chatterjee   |
| Factors Influencing Cost and Performance of Federated and Centralized Machine Learning                                     | Rajasekhara Reddy Duvvuru Muni; Hwang-Ki Min; Sivakumar Tadi Venkata; Sagar Kaushik; Aniruddha Bardhan; Karthikeyan Kumaraguru; Ibrahim Abdul Majeed |
| Deep Learning Based Optimal Traffic Classification Model for Modern Wireless Networks                                      | Putta Hemanth Kumar  |
| Unsupervised Abstractive Text Summarization with Length Controlled Autoencoder   | Abhinav Dugar; Gaurav Singh; Navyasree B; Anand Kumar M  |
| Voice Assisted Image Captioning and VQA For Visually Challenged Individuals  | Rushil D Patel; Kristen Pereira; Joy Almeida; Rupali Sawant  |

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| Wasserstein Distance for Attention based cross modality Person Re-Identification                         | Nirmala Murali; Deepak Mishra   |
| English-to-Malayalam Machine Translation Framework using Transformers                                    | Jijo Saji; Midhun Chandran; Mithun Pillai; Nidhin Suresh; Rajeev Rajan                |
| Adaptive Super Twisting Control of Stewart Platform Based on Super Twisting Observer                     | Safeena M K; Dr. Jiji K S; Ramesh Kumar P   |
| Predicting Wildfire using Live Fuel Moisture Content with Machine Learning                               | Ramalingaswamy Cheruku; Aman Kohil  |
| Realization of Turbo Decoder on Coarse Grained Reconfigurable Architectures                              | Swathi Sekhar; Yadukrishnan Gopinathan; Yamuna B; Karthi B                            |
| Analysis of Subword based Word Representations Case Study: Fasttext Malayalam                            | Vivek M R; Priya Chandran   |
| Enhanced Group Recommendations using member inclination and item usefulness                              | Jitendra Kumar; Bidyut Kumar Patra  |
| Prediction and Recovery of Radio Link Failure Caused by Environmental Factors                            | Shyamal Krishna Agrawal; Somesh Banerjee; Rajarshi Mahapatra                          |
| Terrain Classification using Transfer Learning on Hyperspectral Images: A Comparative study              | Uphar Singh; Kumar Saurabh; Neelaksh Trehan; Ranjana Vyas; O P Vyas                   |
| Adaptive Sliding Mode Controller for Overactuated Quadrotor UAV  | Binoj James; Bindu G R  |
| Clustering Algorithm To Mitigate Intra And Inter Cell Interference In 5G Backhaul Wireless Mesh Networks | Nirmalkumar S Benni; Sunilkumar S Manvi   |
| Analysis of the key components of segmentation-free bilingual OCR for mobile phones                      | Deepak Kumar; Ramakrishnan A G  |
| Artificial Bee Colony Optimization based Optimal Convolutional Neural Network Architecture Design        | Arjun Ghosh; Dr. Nanda Dulal Jana   |
| NOW - LBP GLCM Feature as the Texture Descriptor of the Camera Fingerprint in Image Forensics            | Aiswariya Raj; Deepa Sankar   |
| An Analysis of Performance Evaluation Metrics for Voice Conversion Models                                | Md. Tousin Akhter; Padmanabha Banerjee; Sandipan Dhar; Dr. Nanda Dulal Jana           |
| Neural Network based Realtime Walking Speed Estimation and Gait Phase Detection using Smart Insoles      | Debadrata Sarkar; Abhijit Singh; Sagnik Chakraborty; Shibendu Shekhar Roy; Aman Arora |
| CMHFL: A new Fault Localization technique based on Cochran–Mantel–Haenszel method                        | Rutwik Dharanappagoudar; Palash Gupta; Dr. Sangharatna Godbole                        |
| An Efficient Floor Plan Classification with Optimized Image Features using Machine Learning              | Karthik K; Safvan Ck; Vinu Abraham Samuel   |
| RiceCloud: A Cloud integrated Ensemble learning based Rice leaf Diseases prediction System               | Abhimanyu Bhowmik; Madhushree Sannigrahi; Deepraj Chowdhury; Debanjan Das             |
| A Novel Segmentation Algorithm For Handwritten Document Using Contour Point Extraction                   | Amitha Mary Benny   |
| A FAISS-based Search for Story Generation  | Godwin George; Rajeev Rajan   |
| Multi-label Comment Classification Using GloVe-RNN Framework   | Sahana Nazar; Rajeev Rajan  |
| Small Text Extraction from Documents and Chart Images  | Rominkumar Busa; Shahira K C; Lijiya A  |

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| Deep neural network aided multi-omics drug response prediction for breast cancer                          | Haneem E M; Abhinav Unniyattil; A Vishnusankar; Abinas V; Abdul Nazeer Ka                                |
| Stacked Attention based Textbook Visual Question Answering with BERT                                      | Aishwarya R; Sarath P; Shibil Rahman P; Sneha U; Sruthy Manmadhan  |
| Microservice-Oriented Cloud-Based Driver Vigilance System for Accident Protections                        | Rachit Verma; Bhagyalakshmi M; Shajulin Benedict   |
| SPEVMS: A Smart and Prioritized Emergency Vehicle Management System                                       | Shreya T,A; Adwitiya Mukhopadhyay  |
| LGCM: A Communication-Efficient Scheme for Federated Learning in edge devices                             | Nafas Gul Nafas Saadat   |
| Multi-label Bird Species Classification Using Hierarchical Attention Framework                            | Noumida A; Rajeev Rajan  |
| Development and Analysis of Convolutional Neural Network based Accurate Speech Emotion Recognition Models | Arun A V; Divya M Vijayan; Ganeshnath R; Ajay Nath S A; Rajesh Cherian Roy                               |
| Enhancing Group Recommendation Using Attention Mechanisam   | V Ramanjaneyulu Yannam; Jitendra Kumar; Leela Sravani; Korra Sathya Babu                                 |
| A Review On Game Theoretical Incentive Mechanism For Federated Learning                                   | Lekha C Warriar  |
| On the Analysis of NB-IoT in the Context of Monitoring Services   | Priyatosh Mandal; Anil Kumar   |
| Cloud-Assisted Dynamic and Cooperative Content Caching in Mobile Edge Computing                           | Manojit Ghose; Vishal Deka; Akhirul Islam  |
| A Review on Trajectory Optimisation Techniques for Launch Vehicles during Ascent Phase                    | Serene Siby; Sreeja S  |
| Machine Learning-Driven Snow Cover Mapping Techniques using Google Earth Engine                           | Saptarshi Panda; Ritu Anilkumar; Bunil K Balabantaray; Dibyajyoti C; Rishikesh Bharti                    |
| Multi-Agent Coverage Path Planning using a Swarm of Unmanned Aerial Vehicles                              | Ragala Chethan; Indrani Kar  |
| RMSOD: A RetinaNet based Mixed Supervised Object Detection Framework                                      | Blossom Treesa Bastian; Jiji C V   |
| Designing a Trustworthy and Secured House Rental System using Blockchain and Smart Contracts              | Chirag Modi; Pooja Yadav; Shubham Sharma; Ajit Muzumdar; C Vyjayanthi                                    |
| Road segmentation from satellite images using FCNN for autonomous driving vehicles                        | Anjitha A P; Saritha M; Baburaj Madathil   |
| Automatic Correction of Speech Recognized Mathematical Equations using Encoder-Decoder Attention Model    | Mounika Yarabolu; Tarakaram Yadalla; Lakshmi Prasanna Yadlapalli; Deepa Gupta; Peeta Basa Pati           |
| Decentralized distributed ledger-based marketplace for trading agricultural goods                         | Alfin Abraham; Santosh Kumar M B   |
| Video Synthesis Strategies for IoRT Environments: Research Challenges and Opportunities                   | Jeevanandham S; Mani Deepak Choudhry; Shirley Josephine Mary R; Anbarasan R                              |
| Real-Time Privacy-Preserving Fall Detection using Dynamic Vision Sensors                                  | Shyam Sunder Prasad; Naval Kishore Mr Mehta; Abeer Banerjee; Himanshu Kumar; Sumeet Saurav; Sanjay Singh |
| Deep Learning-based 3D Object Detection Using LiDAR and Image Data Fusion                                 | Binoy B Nair; Bizzam Murali Bharadwaj  |
| LEAN: Light and Efficient Audio Classification Network  | Shwetank Choudhary; Karthik Cr; Punuru Srilakshmi; Sumit Kumar   |

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| Power Efficient Approximate Booth Multipliers for Error Resilient Applications                                     | Suraj Sathya Prakash; Naren Vilva; Uppugunduru Anil Kumar; Syed Ershad Ahmed      |
| Divorce Astrologer: Machine Learning based Divorce Prediction of Married Couples                                   | Oswald C; Shivam Baranwal; Satya Sree Narayanan S M; Arnab Bhattacharya           |
| Mitigating Cold-Start Delay using Warm-Start Containers in Serverless Platform                                     | Anisha Kumari; Bibhudatta Sahoo; Ranjan K Behera                                  |
| Wild Animal Detection Using Deep Learning  | Sreedevi K L; Anitha Edison   |
| Air Writing Recognition of Geometric shapes using CNN  | S P Samprithi; Niranjana Krupa  |
| Detection of Motorcyclists without Helmet from Traffic Video using Deep Learning Techniques                        | Drisy C; Leena Mary   |
| Post Mergers and Acquisitions Integration Solution using Machine Learning  | Jitendra Maan; Riddhi Nagwekar  |
| Deep Learning-driven Explainable AI using Generative Adversarial Network (GAN)                                     | Jitendra Maan   |
| Unsupervised Pivot-based Neural Machine Translation for English to Kannada   | Hemalatha Gadugoila; Shailashree K K Sheshadri; Priyanka Vivek; Deepa Gupta       |
| An Adaptive Approach to Detect and Track the Cyclone Path Using Remote Sensing Data                                | Shikha Verma; Ankush Agarwal; Kuldeep Srivastava                                  |
| Smartphone Based Human Activity Recognition Using RNN Variants   | Sonia Abraham; Rekha K James  |
| Pose Estimation of Yoga Poses using ML Techniques  | Hema Krishnan; Anagha S; Anagha Jayaraj; Christy Thomas                           |
| A Multi-Start Iterated Local Search Algorithm for the Bottleneck Traveling Salesman Problem                        | Viknesh Rajaramon; Venkatesh Pandiri  |
| Voltage Control of Power System employing Q-Learning based PID Controller  | Jayita Saha; Dipayan Guha; Sumit Kumar Jha  |
| UDDSUI: An Unsafe Driving Detection System Using IoT   | Adwitiya Mukhopadhyay   |
| Robust Tracking Control for Underactuated Autonomous Underwater Vehicles   | Rahul Ranjan Bharti; Jyotindra Narayan; Santosha K Dwivedy                        |
| Perception of United Nations Climate Change Conference in Social Networks  | Susmita Das; Susanta Chakraborti  |
| Robust Manipulation Detection Scheme for Post-JPEG Compressed Images using CNN                                     | Vijayakumar Kadha; Prashant Deshmukh; Krishna Chaitanya Rayasam; Santos Kumar Das |
| Reverberation of ERP Implementation in Manufacturing Enterprises Process Outcomes through IoT: Evidence from India | Mallieswari R; V Rema   |
| Integration of Discriminate Features and Similarity Preserving for Unsupervised Domain Adaptation                  | Obsa Gilo Wakuma; Jimson Mathew; Samrat Mondal                                    |
| Multi lane detection, curve fitting and lane type classification   | Kinnera Merugu; Adarsh S  |
| Automated Analysis and Behavioural Prediction of Interview Performance using Computer Vision                       | Lijiya A; Muhammed Shifan P; Malavika Pokuri; Hepsi D Priya                       |
| A framework for IoT based on Blockchain and Edge Computing in Cyber Physical Systems                               | Payal Thakur; Dr. Vivek Kumar Sehgal  |

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| QuSAF: A Fast ATPG for SAFs in VLSI Circuits Using a Quantum Computing Algorithm  | Manjunath T D; Biswajit R Bhowmik   |
| Reinforcement Learning based Control of a Quadrupe Robot  | Ancy A; Jisha V R   |
| Long Short Term Memory based Covid-19 Mutation Detection for RNA Sequence dataset   | Tomcy Thomas; Teddy Thomas; Romal Jose  |
| An Approach to Effectively Manage Access Control, Privacy, and Information Transparency in Hybrid Blockchain for Decentralized IoT Applications | Hiren Dutta   |
| A Cognitive Study on Semantic Similarity Analysis of Large Corpora: A Transformer-based Approach  | Praneeth Nemani; Satyanarayana Vollala  |
| Telugu Dialect Speech Dataset Creation and Recognition using Deep Learning Techniques   | Rama Sai Abhishek Podila; Ganga Sai Sudeep Kommula; Ruthvik K; Susmitha Vekkot; Deepa Gupta |
| Latency-Aware Task Partitioning and Resource Allocation in Fog Networks   | Mohit Kumar Saxena; Dr Sudhir Kumar   |
| Fault Diagnosis of a Launch Vehicle Actuation System using Wavelet Neural Network   | Anjana Vijayan; Baby Sebastian; Asha Ravindranath   |
| A Multimodal Data Fusion Framework For Fake News Detection  | Athira A B; Abhishek Tiwari; S D Madhu Kumar; Anu M Chacko                                  |
| Saliency Detection From 4D Light Field Images Using an Optimized CNN-based Hybrid Model   | Parvathy Prathap; Jayakumari J  |
| A Deep Learning Approach to Facial Expression Recognition in the Presence of Masked Occlusion   | Shree R Thavarekere; Anushka S Hebbar; Uma D  |
| CTR Prediction Using Wide & Deep and CCPM   | Uphar Singh; Abhishek Barman; Kumar Saurabh; Ranjana Vyas; O P Vyas                         |
| Workload Characterization in HPC Environment for Auto-scaling of Resources – Preliminary Study  | Sharad Sinha; Mahesh Barve; Rahul Hardikar; Ashok Gunturu; Writam Mallik                    |
| Football Player Transfer Value Prediction Using Advanced Statistics and FIFA 22 Data  | V B Jishnu; P V Hari Narayanan; Surya Aanand; Preetha Theresa Joy                           |
| A Quantum Communication Based Secure Road Condition Monitoring Application in Intelligent Internet of Vehicular Things                          | Kumar Prateek; S Maity; Neetesh Saxena  |
| A Survey of Deep Learning Techniques Based On Drone Images For The Search And Rescue Of Victims From Collapsed Structures                       | Tom Toby; Uma Gopalakrishnan; Sethuraman. N Rao   |
| Automatic Fast Fuzzy Clustering Algorithm for Nucleus Segmentation of Color Pathology Images  | Arunita Das; Amrita Namtirtha; Animesh Dutta  |
| Explainable Emotion Recognition from Tweets using Deep Learning and Word Embedding Models   | Abdulqahar M Abubakar; Deepa Gupta; Suja Palaniswamy  |
| Image Based Sentiment Analysis using Bayesian Networks and Deep Learning  | Sahasra Sai Tarun Mandiga; Nayani Jayanth; Sai Prabhath Mallavarapu                         |
| Deep Learning based end-to-end Grasping Pipeline on a lowcost 5-DOF Robotic arm   | Pranay Junare; Mihir Pradeep Deshmukh; Mihir Mangesh Kulkarni; Dr. Prashant P. Bartakke     |
| Throughput Prediction in Smart Healthcare Network using Machine Learning Approaches   | Priyanka Bardalai; Himadri Neog; Prayakhi Emeeta Dutta; Dr. Nabajyoti Medhi; Sanjib K Deka  |
| Multi-Crop Leaf Disease Detection using Deep Learning Methods   | Dr. Mallikharjuna Rao K; Shristy Kashyap  |
| Exploration of Bonafide and Spoofed Audio Classification Using Machine Learning Models  | Naseem Babu; Prattipati Kumar; Jimson Mathew; Udit Satija                                   |



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| Power Efficient Approximate Multiplier Architectures for Error Resilient Applications   | Uppugunduru Anil Kumar; Pavan Kumar Bikki; Sree Hari V.; Syed Ershad Ahmed                       |
| Manifold Learning-Based Feature Transformation for Object Recognition   | Devika A Kadavath  |
| Comparative study of Deep Classifiers for Early Dementia Detection using Speech Transcripts                                       | Anjana S Nambiar; Likhita Kanigolla; Sri Pujya K. V. S.; Deepa Gupta; Susmitha Vekkot; Lalitha S |
| Effect of Dilated Convolution on Performance and Parameters of Devanagari Script-based P300 Speller                               | Vibha Bhandari; Narendra D Londhe; Dr. Ghanahshyam B Kshirsagar                                  |
| <b>Track: Power and Energy Systems</b>  |  |
| Life Cycle Analysis of Hydrogen Production and Fuel Cell Electric Vehicle in Indian Conditions                                    | Jani Das   |
| Relative performance evaluation of Novel controllers used for reducing frequency drifts in Power Systems                          | Keerthana K; C Sreekumar   |
| Impact of TCSC on Distance Protection in Long Transmission Lines  | Yamuna U; Thresia M  |
| Techno-economic assessment of Solar Photovoltaic Plants   | Jahnavi B P; Rohit K Mathew; Ashok S   |
| Higher Order Sliding Mode Controls for the Voltage Control of Microgrids  | Shilpa Manikandan; Ramesh Kumar P  |
| An adaptive PI based distributed control method to maintain accurate power sharing and voltage regulation in DC Microgrids        | Ramu Dadi; Dr Meenakshy K; Dr. Suresh K Damodaran  |
| A Novel Method for Energy Trading in Networked Microgrids Using Matching Theory   | Biji Varghese K V; Dr. Dattatraya N Gaonkar  |
| Optimal Battery Scheduling with and without Renewable Energy Sources for Efficient Home Energy Management                         | Senthil Prabu Ramalingam; Prabhakar Karthikeyan  |
| Application of SCA Tuned FOPID Controller for LFC of Multi-area and Multi-unit Power System with RES Incorporating V2G Technology | Nimai Charan Patel; Swastika Behera; Dipu Mohanta  |
| Modelling and Performance Analysis of Synchronous and Asynchronous Links Integrated into Multi-Machine Systems                    | Rashmi Mn; Dattatraya Narayan Gaonkar  |
| Highly Miniaturized Dielectric Layer Loaded Split Cavity Resonator for Wireless Power Transfer Applications                       | Kali Shreyo Ghosal; Sameh Elnaggar; Chinmoy Saha; Yahia Antar                                    |
| Design and Optimization of Bladeless Turbine  | Bharathi Anand M; Resmi R  |
| A Solution of Bid-based dynamic economic load dispatch using a hybrid Mutualism based Pathfinder algorithm                        | Manoranjan Sahoo; Shekha Rai   |
| Efficient Unsupervised Partial Discharge Detection using Empirical Mode Decomposition and Clustering                              | Babitha B Nair; Anjith M; Baburaj Madathil   |
| State of Charge Estimation of Li-ion Batteries through Efficient Gated Recurrent Neural Networks using Engineered features        | Uday Kumar Reddy Danthaluru Venkata; Ravikumar Bhimasingu  |
| A Two-Layer Transactive Energy System: Upper Layer Analysis   | Ren Zedec S Santos; Jordan Rel Orillaza  |
| A Study on LVDC Systems for Commercial Building Applications  | Lijo Oliprakkattu; Rani Chacko; Rohit R Eapen; Vinu Sankar                                       |
| Comparison of Charge Controllers for Low-Power Solar Applications   | Kurien Jacob; Resmi R  |

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| A Novel Balancing Operation Topology for Single- Phase Supply to Remote Locations from Three- Phase SEIG                          | Samrat Chakraborty; Rajen Pudur   |
| Unified Approach for Estimation of State of Charge and Remaining Useful Life of Li-Ion batteries using Deep Learning              | Bharat Mullapudi; Shanmughasundaram R   |
| Performance Study on Single Phase PWM Rectifier fed Direct Torque Controlled – Induction Motor Drive                              | Senthamizh Selvan; Dr Venkadesan A  |
| Decentralized Energy Trading Model with Smart Grids and Blockchain  | Jaymin B Dafda; Shriniwas Patil; Keyur Parmar                                   |
| Robust and optimal utilisation of power in a grid-interfaced wind energy conversion system with a GWOA-based efficient controller | Kamaraju Mr. Vechalapu  |
| Mitigation of Fuel Cost in Thermal Generators Using Puzzle Optimization Algorithm   | Deblina Maity; Koustav Dasgupta   |
| Evaluation of Performance Parameters of 2T Perovskite/Si Tandem Solar Cells   | Kiran Susan Pavu; Dr Jobymol Jacob  |
| <b>Track: Power Electronics and Drives</b>  |   |
| Design and Control Implementation of High Power Bidirectional DC-DC Converter for EV Applications using DSP Controller            | Yedukondalu Guttula; Susovon Samanta  |
| Design of DC Fast Charging Station with Energy Management   | Shubham Shankar Sonawadekar; Rahul Raj Kar; Rupesh Wandhare                     |
| Single-Phase Grid-Connected High DC-Gain Flyback Converter for EV Battery Charging  | Abhishek Kumar; Mohan Aware; Anup Kumar   |
| Analytical Design Procedure of Synchronous Reluctance Motor and its Validation through FEA  | Rachna Panwar; Ragavan K  |
| Fuel Cell - Battery Integrated BLDC Motor for Electric Vehicle with Regenerative Braking  | K V Anandkrishnan; Sooraj Suresh Kumar; Anilkumar T T; Jayaprakash P.           |
| L-Impedance Multi-stage DC-DC Boost Converter with CLD cell for High Voltage Gain and Reduced Switch Voltage Stress               | Ranjeeta Patel; Amruta Abhishek; Tapas Roy; Chinmoy Kumar Panigrahi             |
| Hybrid Hysteresis Control for SI-MIMO DC-DC Converter   | Hemachander Allamsetty; Bharathraghava Ch; Ganesh Kunchala; Sudheer Kenchugundu |
| On-board EV charging with Vienna Rectifier and LLC Resonant Converter   | Abirami Shree R B; Sindhu M R   |
| Analysis of Converter Fault in Switched Reluctance Motor using Finite Element Method  | Praveen Kumar N; Vishal Khanna S; Roobin Raj S                                  |
| Hysteresis based voltage mode control of three phase two level inverters with constant switching frequency                        | Geethu Chacko; Mathew K .   |
| An enhanced Whale Optimization Algorithm based Control Strategy for LVRT Capability Enhancement of Grid-Connected DFIG-WECS       | Arindam Chakraborty; Tanmoy Maity   |
| Modeling of Single phase IBC with Active Power Decoupling   | Sudharshan Kaarthik; Vidya V; Mohit Kumar                                       |
| A Multiple Fault-tolerant Multilevel Inverter with Hybrid Cascaded H-bridges  | Archin N Babu; Anjali Anand K   |

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| Variable Load Torque Performance Analysis in Flux Weakening Control of PMSM  | Shuaib Akbar K.T   |
| An Investigation of Direct Torque Control for a Six-Phase Asymmetrical Induction Motor   | Ankurkumar P Desai   |
| Performance Analysis of Grid Integrated e-Mobility Charging using Non-linear Control Algorithm                                       | Subhash Kumar Ram; Brijendra Verma; Sachin Devassy; Sukumar Mishra                     |
| Comparative Analysis of Model-Based Approaches for State-of-Charge Estimation in Batteries   | Sai Vinay Kishore Nannapaneni; Seshadri Sravan Kumar Vanjari                           |
| Optimal Torque Angle Tracking of Interior Permanent Magnet Synchronous Machine Drive using Estimated Flux Linkage                    | Deepkumar V. Patel; R Chudamani  |
| Voltage Quality Improvement and Power Management of Islanded AC Microgrids with Variable Loads and Sources                           | Hari Krishnan Sivakumar; Anilkumar Gurrapusala; Karthik Thirumala                      |
| Speed Control of Quadratic Boost Converter Coupled Inverter fed PMSM for Electric Vehicle  | Anjana M P; Kumaravel S  |
| Application of Non-Isolated Quadratic Boost DC-DC Converter for Solar PV Integration   | Vysagh T; Kumaravel S  |
| Analysis of Different Control Techniques for Improved Power Factor and Reduced THD on Three Level Full Bridge AC-DC Converter        | Shanmuga Vadivu Kr   |
| Analysis of Impact of Fringing on Design of Inductors with Air Gaps  | Keerthi Sudha Bandaru V K S L; Sirija Ranabothu; Seshadri Sravan Kumar Vanjari         |
| <b>Track: Technology Enhanced Learning in Engineering</b>  |  |
| A Case Study of an Effective Approach to Utilize the Active Learning for Virtual Basic Electrical Engineering Laboratory in Covid-19 | Satyabrata S Sahoo   |
| Single Channel Speech Enhancement System using Convolutional Neural Network based Autoencoder for Noisy Environments                 | Rantu Buragohain; Gudmalwar Ashishkumar; Chevula Ramarao                               |
| Visual Attention Score and Fatigue Level Measure of Students through Eye Analysis –Machine Learning Approach                         | Raji Gopinathan N  |
| Word-Level Speech Dataset Creation for Sourashtra and Recognition System Using Kaldi   | Punitha Vancha; Harshitha Nagarajan; Vishnu Sai Inakollu; Deepa Gupta; Susmitha Vekkot |
| TinyML Based Physical Computing for Education  | Sharad Sinha; Anusree Debbarma   |
| Joint Cross-Domain Preserving and Distribution Adaptation for Heterogeneous Domain Adaptation  | Lekshmi R; Babita Jose; Jimson Mathew  |
| Light-weight Recommendation System using Graph Neural Networks   | Seema Safar; Babita Jose   |
| Deep learning model to empower student engagement in online synchronous learning environment   | Cinthia Joy Godly; Venki Balasubramanian; Rehena Sulthana Mohammed; Godly Chackappan   |
| Structural Frameworks for Multi-modal Teaching Methods   | Manoj Bs   |
| Self Regulated Solar Powered IoT Based Egg Incubator   | Joel Siby; Rani Chacko; Abin Tomy; Arjun Shaji   |
| Conversion of Hand Gesture to Speech for Speech Impaired People  | Deep Ramesh Chavan; Maheshkumar H. Kolekar   |
| A Novel Forensic Methodology for SQLite Database Carving   | Gargee Handique; Satheesh Kumar S; Jinu S V; Priyanka V S                              |
| A Study on Student Cyber safety consciousness in the light of Online Learning  | Md Shaik Amzad Basha; Martha M Sucharitha  |

## **Special Tracks**

### **Adaptive Machine Learning in the Cloud-Based IoT**

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| Smart Wearable Glove for the Visually Impaired Person as a Third Eye   | M Arun Kumar; Nagarjuna Telagam; Sainath Reddy Dola; Yaswanth Kumar R; Sai Sushmitha; Muskan Shaik |
| To Increase Security And Privacy, The QAES Encryption Algorithm is Used for Storage of Data for Cloud Computing.                               | Geetha Edupuganti Rani   |
| Behavioral Biometric Authentication using Keystroke Features with Machine Learning   | Rhea Chandok; Vishwajeet Bhoir; Santhanakrishnan Chinnaswamy                                       |
| Localization of the Sensor Nodes in Precision Agriculture using a Hybrid Model   | Tripti Singh; Abhishek Bajpai  |
| Arming Farmers with Smart Farming: The Future of Agriculture   | S. Arunmetha; K Prakash; M Gnaneswar Reddy; S. Nirmala   |
| An integrated medical convertible wheelchair with IoT based surveillance system for patient monitoring: Design and Development                 | S.N. Panda; Mamta Janagal; Sanjeev Verma; Usha Desai   |
| Agent-based resource scheduling in a cloud environment using the intelligent technique   | Preetham N; Annapurna P Patil  |
| The impact of transfer learning on lung cancer detection using various deep neural network architectures                                       | Nishiya Vijayan  |
| Smart AgrIoT : A Machine learning and IOT based complete farming solution  | Samina Arif Attari; Ashutosh Gupta; Omkar Dhatingan; Yashrajsingh Bais; Atharva Alshi              |
| Autoencoder Based FDI Attack Detection Scheme for Smart Grid Stability   | Amritha G; Vishakh Kh; Manjula G Nair; Jishnu Sankar V C   |
| Deep Learning-based Border Surveillance System using Thermal Imaging   | Saurav Kumar; Sarthak Mr. Malik; Sumathi P   |
| Efficient Real-time Traffic Management and Control for Autonomous Vehicle in Hazy Environment using Deep Learning Technique                    | Bagesh Kumar; Utkarsh Garg; Soham Mehta; Amritansh Mishra; Sourav Dey; Aman Gupta; O P Vyas        |
| An Architecture Comprising of Convolutional Neural Network (CNN)-Support Vector Machine (SVM) and CNN-SoftMax For Cricket Shots Classification | Bagesh Kumar; Priyanshu Sobti; Om Suhas Vibhandik; Aditya Kumar; Vaidik Sharma; Op Vyas            |

### **AI Ethics**

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| Left Atrium Segmentation Using Deep Learning Model   | Rishav Aryan   |
| A New Quantum-Inspired Salp Swarm Optimization Algorithm for Dynamic Optimization Problem    | Sanjai Pathak; Ashish Mani; Mayank Sharma; Prof Amlan Chatterjee |
| Image Sterilization through Adaptive Noise Blending in Integer Wavelet Transform             | Sreeparna Ganguly; Imon Mukherjee                                |
| Comparative Analysis of Conventional and Machine Learning Models for LED Lifetime Estimation | Lokesh J; Savitha G Kini; Mahesha M.G; Anjan N Padmasali         |

### **Advancement in Power Electronics for E-Mobility**

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| Switched Inductor Based DC-DC Converters for Electric vehicles: A Comprehensive Review                                    | Yashwanth Pola; Sravan Nibhanupudi; Naresh Karra                           |
| Electric Vehicle Market Analysis and Trends   | Namitha Murali   |
| Performance Analysis of a Single Phase Integrated Charger for Electric Vehicles   | Jojin Thomas; Menda Ramesh; Dr Venkadesan A                                |
| Analysis and Real-Time Implementation of High Power Interleaved DC/DC Converter for EV Applications                       | Yedukondalu Guttula; Susovon Samanta                                       |
| Mitigation of torque ripple in ZSI based BLDC motor with Direct Torque Control techniques                                 | Avismrit Dutta; Nilanjan Das; Aurobinda Panda; Dr. Sukanta Halder          |
| 120 kW BLDC Motor Design for Electric Train Application using ANSYS Maxwell   | Nikhil Nagesh Bobe; Vijaya Sanjay Rajguru                                  |
| Performance Evaluation of Dynamic Wireless Charging System with the Speed of Electric Vehicles                            | Dr. Kundan Kumar; Kantipudi V V S R Chowdary; Byamakesh Nayak; Vima P Mali |
| Reverse Mode Power Flow Analysis of Coupled-Inductor Based Dual Active Bridge Converter for Electric Vehicle Applications | Dr. Kundan Kumar; Varshini Badugu  |
| Assessment of Dynamic Wireless Charging System with the Variation in Mutual Inductance                                    | Kantipudi V V S R Chowdary; Dr. Kundan Kumar                               |

### **Application of Blockchain in the Energy Sector**

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| Blockchain based energy transaction in microgrid | Leo Raju; Surabhi Surendar; Vimalan Mani |
| Smart Contract based Energy Trading-An overview  | Athira S Jayavarma                       |

### **New Trends in Topological Development of Power Electronic Converters and its Control for Diverse-source fed Green Energy Applications**

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|---|---|
| Energy Management In Hybrid Electric Vehicle  | Pavan H S; Sridhar S; Kodeeswara Kumaran                                    |
| LVRT Capability Enhancement of DFIG with FACT Device and Superconducting Technology   | Anju M; Dr. Shihabudheen K V; Mija Sj                                       |
| Active Switched-network Modified Quasi-Z-Source Inverter  | Vadthya Jagan; Dharavath Vijay; Bonagiri Manikanta; Ganta Vamshi            |
| Single-Stage Extendable Multi Level Inverter with Integration of Step-Up Switched-Capacitor Unit & DC-Link Capacitor Unit                 | Bhupesh Goyal; Prerak Bhardwaj; Man Mohan Garg; Senthil Lakshmanan          |
| ZCS-ZVS Operation of a Double Frequency High-Voltage Gain Boost Converter   | Preeti Sharma; Prashant Upadhyay; Rajneesh Kumar; Sara Hassanpour           |
| An Approach to eliminate the Non-Minimum Phase issue in High Gain Converters  | Preeti Sharma; Rajneesh Kumar; Sara Hassanpour                              |
| Fixed Frequency Integral Sliding Mode Control for Bidirectional Switched Quasi Z-source DC-DC Converter in Standalone PV Connected System | Santhoshkumar Battula; Man Mohan Garg; Anup Kumar Panda; Laxmidhar Senapati |
| Reduced Capacitor Voltage Based High Boost Active Switch Controlled Z-source Inverter   | Sudhansu Sekhar Das; Aurobinda Panda; Avismrit Dutta                        |
| MATLAB-based Simplified Mathematical Modelling of Non-ideal Differential Mode Inverters   | Kartik Tank; Man Mohan Garg; Dr. B. L Narasimharaju                         |
| PV Connected off-Grid 2-Stage Conversion System with Proposed High Gain Z-Source DC-DC Converter  | Meghraj Morey; Nitin Gupta; Man Mohan Garg; Manikanta Golla                 |

Indirect Sliding-mode Digital Control for DC-DC Cuk Converter  
Laxmidhar Senapati; Anup Kumar Panda; Man Mohan Garg; Santhoshkumar Battula; Rajesh Kumar Lenka

### **Integration of Distributed Energy Resources and Electric Vehicles in Power Distribution Systems - Challenges and Solutions (DER & EV in PDS)**

High Impedance Fault Detection and Control Methods in AC Microgrids: A Review  
Remya Mol N; Bindumol E K

Optimal Sudoku, skyscraper and Proposed Reconfiguration Techniques for Extraction of Maximum Power under Partial Shading Conditions  
Chavan Vinaya Chandrakant; Suresh Mikkili

Continuous Current Featured Quadratic Boost Converter with Xilinx System Generator-Based PI Controller for Renewable Energy Integration  
Kumaravel S; Sija Gopinathan; Gundlapalli Hemanth Kumar

Energy Management System for Hybrid Renewable Energy-Based Microgrid  
Geethika Rani Bingi; Rami Reddy Ch; Kondalu M; Chandra Sekhar D

Impact of DG and D-STATCOM Integration in RDN on Power Losses and Voltage Profile Considering Load Growth  
Srinivas Nagaballi

Time Series prediction of Solar Radiation using Transformer Neural Networks  
Faresh Khan K H; Mohammed Mansoor O; Sishaj P Simon

### **Intelligent Controller-based Grid Integration of Renewable Energy Sources and Its Challenges**

A Reliable Fuzzy Logic Controlled Power Converter Type Fault Current Limiter for Interconnected Power Systems  
Naufal N; Dr. Sheeba R; Sindhu D Pillai; Anupama V N; Adarsh P J; Kevin Shalu; Krishnapriya U; Aneeta George

Relay Switch Matrix based Optimized reconfigurable Solar PV Battery Charger  
Geno Peter; Samat Iderus; Albert Alexander S

Solar PV Based System for Health Care Applications Intended for Rural Locality  
Geno Peter; Albert Alexander S; Samat Iderus

Energy Consumption Forecasting in Home Energy Management System using Deep Learning Techniques  
Mounica Nutakki

PV fed Vehicle Application with Fuzzy Controlled AOF for Nonlinear Load  
Sai Jyothirmayi Yenuga; Rami Reddy1 Ch; Kondalu M; Chandra Obbu Sekhar

Computational Study of Fully Perovskite Double Layer Absorber Based Solar Cell Devices  
J Lakshmi Prasanna; Ekta Goel; Amarjit Kumar; Atul Kumar

Design and Analysis of Cascaded H Bridge Converter with ANN based SPWM Technique for EV Applications  
Lakshmanan Sorakka Arunagiri; Dr. Venkatesh Kumar M; Anuradha Reddy; Kamlesh Naga; Batni

Emergency Message Dissemination through MQTT over the Internet of Vehicles  
Manikandan A; Naresh Kumar B; Pranavan V M; Sri Lasya Pragathi B; Cheng Chin

Adaptive Over Current Relay Protection in a PV Penetrated Radial Distribution System With Fuzzy GA Optimisation.  
Lekshmi R Chandran; Anju Parvathy V S; Ilango Karuppasamy; Manjula G Nair

### **Intelligence on Chip**

High Speed and Low Power DSP Architectures for Barker-13 Radar Pulse Compressor  
Anoopkumar K A; Pardhasaradhi Bethi; Vandana G S; Raja K Rajeswari; Pathipati Srihari

An Efficient Low-Power VIP-based VC Router Architecture for Mesh-based NoC  
B Naresh Kumar Reddy; Aruru Sai Kumar

Design of In-Memory Computing Enabled SRAM Macro  
Kanika Monga; Sunit Behera; Nitin Chaturvedi; S Gurunarayanan

Accelerators for Sparse Matrix-Matrix Multiplication: A Review  
Noble G; Nalesh S; Kala S

Implementation of STDP for Spintronics based SNN using 90nm CMOS Technology  
Rose Mary Kuruvithadam; Nalesh S

Word Line Underdrive Technique to Increase Signal Swing and Linearity for In-Memory Compute Applications (IMC) in 65nm LSTP technology  
Belal Iqbal; Abhinav Bajoria; Pulkita Gupta; Shubham Goyal; Anuj Grover

Impact Analysis of Communication Overhead in NoC based DNN Hardware Accelerators

Neethu K; Enrico Russo; Rose Kunthara; Rekha James; Dr. John Jose

In-Memory Computing Based Hardware Accelerator Module for Deep Neural Networks

Dhanaraj K J; Ellickal Allen Appukuttan; Emmanuel Thomas Devasia; Harinandan R Nair; Hemanth S; Maleeha Abdul Azzez