

2024 International Conference on Computing and Intelligent Reality Technologies (ICCIRT 2024)

**Coimbatore, India
5-6 December 2024**



**IEEE Catalog Number: CFP24OZ6-POD
ISBN: 979-8-3315-1030-5**

**Copyright © 2024 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:	CFP24OZ6-POD
ISBN (Print-On-Demand):	979-8-3315-1030-5
ISBN (Online):	979-8-3315-1029-9

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

Contents

Sign Language Detection in Real-Time Applications.....	1
<i>Renata Rachael Milinda, Sara, Barrister Ramsiej, Reshma Yasmin, V.D. Ambeth Kumar, Sekar K</i>	
Machine Learning for Strategic Sales Forecasting in Retail Chains.....	5
<i>Tharanimathi Rajaram , M. Udhayamoorthi</i>	
A Comprehensive Survey of IoT Security, Trust Models, and Cloud-Based Solutions for Ensuring a Secure Connected Future	11
<i>Shameer M., P. Rutravigneshwaran</i>	
Voice assistance to blind people by detection of surrounding objects, activities, and humans.....	16
<i>Suhas Preetham Kambham, Raahul Varman, Tadepalli Sri Valli Ramya, M K Eniyan, Senthil Kaumar Tangave . K Somasundaram, Selvanayaki Kolandapalayam Shanmugam</i>	
Gloss-Free Sign Language Translation using Sign2gpt-Next Technique	22
<i>A. Babisha, Sundar R, G. Umarani Srikanth, D.R.Angel Kiruba</i>	
Conversational Interface for Textual and Visual Data Interpretation using customized CNN.....	28
<i>Devang Kumar Bharti, Shikhar Bhandari, Shikhar Shukla, Apeksha Koul</i>	
Sign Language Production Using Generative AID	33
<i>Karthika Renuka , L Ashok Kumar, K R Harini, L Nithin, P R Rishi Khanna, Suruthika J</i>	
A Smart Pill Dispenser with Real Time Alerts, Remote Access, and Enhanced Safety	39
<i>S.Vimal, R.Veeravasanthan, P.S. Surendar, S.Vishnu Shiva Prakash, S.Sumathi</i>	
Vision Transformer-Based Computer-Aided Diagnosis System for Histopathological Image Classification in Lung and Colon Cancer	43
<i>Babu Sallagundla, Raj Kumar Srungarapati, Jaya Bhargav Nand Dammu</i>	

Crop Recommendation Using Supervised Learning Techniques.....	49
<i>Sallagudla Babu, Mallavarapu Vivek, Dammu Jaya Bhargavnand Gandham Kumar N S L</i>	
A Multi-Layer Encryption and Anomaly Detection Framework for Securing SCTP Data Transmission	55
<i>P.Venkadesh, S.V.Divya, Geetha Ponnaian, T.Saju Raj, S.Ninisha Nels, K.Subash Kumar</i>	
Fig Leaf Disease Prediction and Severity Estimation Using Deep Learning.....	60
<i>K. R. Prasanna Kumar, M. Gunasekar, K. Logeswaran, Dhanya Sree P, Malathi P</i>	
Convolutional Neural Networks in Breast Cancer Diagnosis: An Integrated Model....	66
<i>Dafnee, M. Jayasheela</i>	
Deep Learning-Based Identification of Birds in Agricultural Fields.....	72
<i>Keya Chaturvedi , M Nithin SKantha, Navanithi V K, Pranesh R, Harissh G, Shimly Stanly Senthil Kaumar Tangavel, S. Rajendrakumar</i>	
Robotic Station Assistant.....	78
<i>Divya K S, Akshaya Jayaraj, Gripsy Paul, Chinnu Mariya Varghese, Neetha K Nataraj, Sanjay Gireesan</i>	
SignChatAI-Generative AI for Deaf-and-Mute Community using Indian Sign Language(ISL).....	84
<i>P.Venkadesh, S.V.Divya, Jelin Taric.G, K.Anuranjani</i>	
Spoken Language Translation using Wav2vec, Mbart And Wavenet.....	89
<i>D.Karthika Renuka, L.Ashok Kumar, R.Geetha Rajakumari, Indhu Gayatri K, K K.Subiksha, Sindhiya V, Sri Nithi Palanisamy</i>	
A Novel Approach for Retinal Vessel Extraction Using Multi-Scale Deep Learning and Morphological Techniques.....	95
<i>Kavya G S, Kumarganesh. S</i>	
Handwriting Analysis for Personality Trait Prediction.....	101
<i>Swetha Sree S, Karanam Rushitha Chowdary, Jesline Daniel</i>	
Collision Avoidance System in Autonomous Vehicles using YOLOv4.....	107
<i>R.Senthil Prabha, Premika A, Sanjana M, Sarveshwaar S S, Harshavarthanan S</i>	

Comprehensive Security Measures for Mobile Phones: Protecting Against Information Theft.....	112
<i>G.Vimal Subramanian, K. Suthendran, S. Sankralingam</i>	
A Hybrid Analysis of financial distress prediction using Machine Learning.....	117
<i>Batchu Sai Sathwik, G. Vimal Subramanian, B. Anil Yadav, Gopi Raju G, Mahammad Ghouse B</i>	
Optimized Phishing Detection through URL Analysis By a Gradient Boosting-RNN Ensemble.....	123
<i>Nithya T, Shanmathi A B, Sathya K, Vasuki J, YaswanthKumar K</i>	
Classification, Segmentation and Quantification of acute lymphoblastic leukemia cells in the bone marrow.....	128
<i>Theou jeffine, S. Kiruthika, J. Joshan Athanesious</i>	
Smart Signature-based Intrusion Analysis System with Pre-Scaled Learning for Large Networks.....	132
<i>Hemanth Sai Vardhan Balivada, Shanmuka Vardhan Bandarupalli, Dasari Vishal, Soma Siva Pravallika, Manas Pandey, Senthil Kumar Thangavel, Somasundaram K</i>	
Performance Analysis of Local Binary Pattern Features with Eagle Optimization Algorithm based CNN Classifier for Breast Cancer Detection from Ultrasound Images.....	138
<i>Gowri Shankar Manivannan, Rajanna S, Chethana K R, Asra Firdose, Bharath C, Adithya N</i>	
Performance Analysis of LSTM Classification Model from GLCM with Lion Optimization Algorithm Features for Melanoma Identification from Skin Cancer Images.....	143
<i>Gowri Shankar Manivannan, Kaveri K B, Sinchana A R, Shifa Fathima, Sonika T M, Priya D P</i>	
Integrated Drone Solutions for Landmine Detection.....	148
<i>K.Sherin, A.R.Darshika Kelin, Katta Rohith, Mithun Kumar N</i>	
Women Safety Night Patrolling Robot Using Raspberry Pi 3Yaragani.....	153
<i>Balaji, Srinivasulu Raju S, Ragi Sai Ram, Cheemala Sri Viresh, Annabathula Lohith</i>	

Thyroid Cancer Prediction Using Deep Learning Techniques.....	159
<i>Deepana D, Renuga P, Mohanapriya A P, Stephen Sagayaraj A, Karthiga M</i>	
Parkinson's Disease Predictive Analysis Using Machine Learning and Appointment Booking.....	165
<i>Thangaraj K, Akilandeswari J, Sandhiya R, Sankari P T, Vaishnavi M</i>	
Harnessing Machine Learning and Image Processing for Prompt Disease Detection in Ocimum tenuiflorum Cultivation.....	171
<i>Parthiban Mohandas, Kada Rama Sujithx, Amaravathi Duraipandian, Dulapalli Girjhan, Vasa Sai Durgarao, Toleti Pramod</i>	
Enchaining Security Through The Implement Of Deep Learning Techniques For Intelligent Intrusion Detection	177
<i>M.Malathy, E.Kamalanamaban, S.Nayagan, KeerthikaR, Jenani G, Deepika A</i>	
Revolutionizing Property Transactions Through Integration Of Block chain And Security.....	183
<i>M.Malathy, E.Kamalanaban, K. Mahalakshmi, K.M. Pooja, Renu D,Philo Jenita.X</i>	
Hospital Recommendation Systems Using Decision Tree and Cosine Similarity	189
<i>MethodsKothai G, Pavithra V, Shivadharshini G Jeevadharshini M, Haripriya R, Vishal E S</i>	
Performance Analysis of Rabbit Algorithm with Gaussian Process Classifier for Detection of Adenocarcinoma from Lung Cancer Histopathological Images.....	194
<i>Kumaresan K, Vairavel K S, Gowri Shankar M, Sudhahar S, Dhanasekar R, Sonika T M</i>	
Leveraging Machine Learning for Enhanced Software Defect Prediction and Quality Assurance: A Comparative Analysis.....	198
<i>Parthiban Mohandas, Amaravathi Duraipandian, Voleti Chaitanya, Allam Naga Tharun, Divi Bala Vishnuvardhan, Donelli Naga Vinay Kumar</i>	
Grape Leaf Disease Detection And Classification Using Machine Learning.....	203
<i>Nagamani T, Dhivya, Athish S, Hariharan M</i>	
AIoT-Based Water Quality Monitoring System for Enhanced Mud Crab Farming....	209
<i>Krosuri Lakshmi Revathi, Krosuri Charukesh Pitchuka Surya Suprabhas, Masood Ali Khan</i>	

Driver Safety Monitoring: Real-Time Detection Of Distraction And Drowsiness	215
<i>Dhanapandi V, Ashok E, Ajai R, Deepan N , Giriprasath M</i>	
TransNet: A Hybrid Deep Learning Architecture Combining CNNs and Transformers for Enhanced Medical Image Segmentation.....	221
<i>Manjunatha A, Neelappa , Mahendra G</i>	
StockAI - Stock Analysis Tool Agent.....	226
<i>Kowshik S B, Samhitha Nair, Kiruthika S, J. Joshan Athanesious</i>	
An IoMT-Enabled Healthcare System Employing Robotics and Deep Reinforcement Learning with Temporal Convolutional Networks (TCNs) for Dynamic Surgical Data Analysis.....	231
<i>Dharma Teja Valivarathi, Sreekar Peddi, Sai Sathish Kethu, Durai Rajesh Natarajan, Dede Kurniadi</i>	
A Real-Time AI-Driven Surgical Monitoring Platform Using Robotics, 3D Convolutional Neural Networks (3D-CNNs), and Bayesian Optimization for Enhanced Precision.....	237
<i>Kannan Srinivasan, Guman Singh Chauhan, Rahul Jadon, Joseph Bamidele Awotunde</i>	
Adaptive Test Case Prioritization in Financial Applications Utilizing Graph Neural Networks and Crow Search Algorithms.....	243
<i>Sunil Kumar Alavilli, Bhavya Kadiyal, Rajani Priya Nippatla, Subramanyam Boyapati, Chaitanya Vasamsetty, Harleen Kaur</i>	
Ultra-compact System for Identifying Driver Attention Lapses to Improve Traffic Safety.....	249
<i>Raghi K R, Anne Merin Mathew, Sudha K, T.M.Thiyagu, Anto Melvin Mathew</i>	
Design of Anti-Theft Recognition System Using Kanade-Lucas-Tomasi based feature extraction method.....	255
<i>Lymraina Oshin Veronica Fernandes, Sunanda Das, V. Vivek, Rhythm Sarker, Magizharasi M</i>	

Computer vision for enhancing security and surveillance in a public space.....	260
<i>Deepak Dilip Jadhav, Saswati Debnath, Revanuru Harinath Reddy ,K Ramalakshmi, Kabildev Chellamuthu</i>	
Advanced Surveillance System for Public Safety.....	265
<i>Kevin Lemuel Thomas R, Jerome Sanjay G, K. Sudha, K. R. Raghi</i>	
Object Detection And Tracking For Personal Protective Equipment.....	271
<i>C Harinath Reddy, Saswati Debnath, G. Tharani, S. Saketh Reddy</i>	
A Smart Automated Attendance Monitoring System Using Deep Learning Model	277
<i>K.Lalli, Senbagavalli M Velloresyed</i>	
Facial Emotion-Based Music Recommendation System with Social Media Sentiment Integration.....	281
<i>Anjana Girish, Roshika R, Kalaimaran, Karthik N</i>	
Microplastics Detection in Soil and Water: Leveraging IoT Technologies for Environmental Sustainability.....	286
<i>John Bosco Johnpaul, Sai Rithika A, I Thusnavis BellaMarry, Vishalakshi, Prince Thomas, Mangalapuri Mercy</i>	
IOT Botnet Detection using a Hybrid of CNN-LSTM with Blockchain.....	293
<i>Aditya Ranganthan Arun, Annisha R. de Souza, Sairam S, Vani V, Karthik N</i>	
Speech Therapy Assistance through Gamification.....	298
<i>Neha Elizabeth Syam, Aleena Scariah Vempeny, Ann Mariam Biju, Erin Mary Abraham, Anjali S</i>	
AI-Enhanced Security Architecture for 6G Networks: A Federated Learning and Multi-Agent Approach.....	303
<i>Teresa V.V, Dr.J.Dhanaseker, Arjun S, Naveenraj R, Antru Subil A, Ahmed Najeeb PM</i>	
Efficient Path planning for Automated Guided Vehicles in Intelligent Logistics System using Double Q-learning	309
<i>Anitha ,Yesubai Rubavathi, Revathy</i>	

EEG Interpretation for Healthcare: Emotional Analysis using GRU and Activity Tracking with Epilepsy Diagnosis using Random Forest.....	314
<i>Aldo Stalin J L, Jeba Emilyn J, Monish P, Jagan B, Giridharan P, Mukesh K</i>	
Companion Recognition System for Amnesia Affected Persons.....	320
<i>Ignisha Rajathi G, Deepti Sisodia, Devin James R, Subhash R, Hari Krishnan R, Raja Balaji N, Dhanush M, Yogeeshwaran G</i>	
ECG Arrhythmia Classification Using CNN-BiLSTM Models for Enhanced Diagnostic Accuracy.....	326
<i>Kothai G, Saarathy Mithran R S, Kishore Balaji B, Suryaprakash S, Sanjai M, Sanjai P</i>	
Enhanced Multi-Class Skin Cancer Classification Using Attention-Based Convolutional Neural Network with HOG Feature Extraction and ROI-Centred Pre-processing.....	331
<i>Hariarasi A, Banumathi J</i>	
Astroturfing Exposed: Uncovering the Role of Astroturfing in Shaping Trust and Engagement Online	337
<i>Akshata Balasaheb Badade , Rajesh Kumar Dhanaraj</i>	
Pinnacle of Steganography Security with Fernet	342
<i>Senthil Kumar M, Linett Sophia D, Ashok Kumar P, Kathirvel R, Gokulnath M, Roja Sri</i>	
The Adverse Medication Interaction and Disease Correlation Analysis Using Deep Learning.....	347
<i>Subha R, Yuvaraj S, Sakthi Santhosh B, Raghul S, Karthikeyan A, Mithreshvar MSA</i>	
Machine Learning for Malware Detection: A Comprehensive Review of Visual, Textual and Network Traffic Features.....	353
<i>Jasmine Jolly, Ananthanarayanan V</i>	
Intrusion Detection using Feedforward Neural Network for Enhancing Network Security.....	361
<i>Mudita Uppal, Deepali Gupta, Sapna Juneja, Shrikant Mapari, C.N.Vanitha, Shilpa Saini</i>	

Multivariate Temporal Forecasting for Preterm Cardiorespiratory Vital Monitoring using Multihead Autoformer Network.....	367
<i>Nancy Jane Y, Pabitha P, Lakshmi V, Sumanth S Badhya</i>	
Advanced chat application integrating machine learning for sentimental analysis.....	373
<i>Santanu Layek, Gauransh Sharma, Vihan Agarwal, C.Chandru Vignesh</i>	
Integrating Classification, Segmentation, LLM, and Attention Maps for Advanced Histopathological Image Analysis in Lung Cancer	378
<i>Priyan Malarvizhi Kumar, Yelisetty Shanmukh Rahul, Balasubramanian Prabhu Kavin</i>	
Utilizing Blockchain Technology for Financial Services in Parallel, Distributed, and Grid Computing Frameworks.....	385
<i>Prakash Chokkamreddy, Anusha Palagati, Akurathi Lakshmi Pathi Rao, Maheswari P, Vanitha Mahadevan, Santhosh Kumar Balan</i>	
Comparative Analysis of Machine Learning Algorithms and Datasets for Detecting Cyberbullying on Social Media Platforms.....	391
<i>Anusha Palagati, Santhosh Kumar Balan, Arun Joe Babulo S, Laxmi Raja, K.K.Natarajan, Rajkumar Kalimuthu</i>	