2021 International Conference on Information and Communication Technology for Sustainable Development (ICICT4SD 2021)

Dhaka, Bangladesh 27 – 28 February 2021



IEEE Catalog Number: ISBN: CFP21Y11-POD 978-1-6654-4752-2

Copyright © 2021 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:	CFP21Y11-POD
ISBN (Print-On-Demand):	978-1-6654-4752-2
ISBN (Online):	978-1-6654-1460-9

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



Table of Contents

Paper ID	Paper Title	Page No
2	Design and Implementation of Three-Axis Solar Tracking System with High Efficiency	1-5
3	Forecast the Rating of Online Products from Customer Text Review based on Machine Learning Algorithms	6-10
4	A Hybrid Approach for Automatic Extractive Text Summarization	11-15
6	Analyze the Impact of Demand Side Management on Grid Power for an Isolate Zone in a Sustainable IEEE 14 Bus System	16-20
10	Impact of Sentiment Analysis in Fake Online Review Detection	21-24
13	Coordinates Determination of Submerged Mobile Sensors for Non-parallel State using Cayley-Menger Determinant	25-30
20	A Data Mining Approach to Identify the Stress Level Based on Different Activities of Human	31-34
21	High Performance Classification of Caltech-101 with a Transfer Learned Deep Convolutional Neural Network	35-39
26	Bengali Sentiment Analysis of E-commerce Product Reviews using K-Nearest Neighbors	40-44
30	Design and Development of a Smart Wheelchair for the Disabled People	45-49
33	Preterm Baby Birth Prediction using Machine Learning Techniques	50-54
39	Opinion Mining: Is Feature Engineering Still Relevant?	55-59
40	Prediction Of Thyroid Disease(Hypothyroid) In Early Stage Using Feature Selection And Classification Techniques	60-64
42	Bangla Aspect-Based Sentiment Analysis Based on Corresponding Term Extraction	65-69
43	Predicting COVID-19 infections and deaths in Bangladesh using Machine Learning Algorithms	70-75
44	Impact of structural modification by spacer layer inclusion on AlGaN/GaN HEMT performance	76-81
50	Tomato Plant Diseases Classification Using Deep Learning Based Classifier From Leaves Images	82-86
54	Roles of Brand Image and Effectiveness on Smartphone usage over Digital Marketing	87-90
55	Vision System Actualization for Object Localization Robot	91-94
57	Birth Mode Prediction using Bagging Ensemble Classifier: A Case Study of Bangladesh	95-99
60	An L-slot Compact Antenna for Medical, Wearable Device and IoT Applications	100-104
61	A Comparative Study of Classification Approaches for COVID-19 Prediction	105-109
62	A Convolutional Neural Network Model for Early-Stage Detection of Autism Spectrum Disorder	110-114
63	Tree-Based Classifier for Hyperspectral Image Classification via Hybrid Technique of Feature Reduction	115-119
64	Analysis on Handwriting Using Pen-Tablet for Identification of Person and Handedness	120-124
66	A Novel Approach of Detecting Image Forgery Using GLCM and KNN	125-129
68	Privacy Preserving Serial Publication of Trajectory Data	130-135
71	Security Policy Based Network Infrastructure for Effective Digital Service	136-140
72	Improved Prediction of Glutarylation PTM Site using Evolutionary Features with LightGBM Resolving Data Imbalance Issue	141-145
74	Data Assimilation: Two Different Perspectives Based on the Initial-Condition Dependence	146-150
98	Noninvasive Heart Rate and Blood Glucose Level Estimation Using Photoplethysmography	151-155
102	WSN based Advanced Emergency Fire Alarm System Using MQTT Centric Star Topology	156-160
110	A Hybrid MCDM Approach based on AHP, and TOPSIS to select an ERP system in Bangladesh	161-165
116	Rice Disease Detection using Intensity Moments and Random Forest	166-170
117	JCVirusNEntamoebaNET (JCENET): A Deep Neural Network for John Cunningham Virus and Entamoeba Parasite Detection	171-175
119	Proposing an Energy optimized routing protocol for UWASN based on clustering	176-179

Table of Contents

Paper	Paper Title	Page No
ID 122	A Comprehensive Study of Machine Learning algorithms for Predicting Car Purchase Based on	180-184
	Customers Demands	100 101
124	Design and Implementation of a Plc Based Automatic Industrial Drainage System	185-188
139	Automatic Digit and Alphabet Recognition Based Online Toll Collection System	189-194
140	Movie Genre Classification with Deep Neural Network using Poster Images	195-199
145	Septic Fruit's Maturity Inspection and Grade Evaluation Adopting Computer Vision -A Review	200-204
146	Dementia Identification for Diagnosing Alzheimer's Disease using XGBoost Algorithm	205-209
149	Deep Learning based Detection and Segmentation of COVID-19 & Pneumonia on Chest X-ray Image	210-214
150	Mars Rover and Its Strategic Implementation	215-219
151	Solar Energy based Net Metered Easy-Bike Charging Station in Bangladesh	220-224
154	Generating Hydroelectricity using Recycled Water	225-230
155	Application of Machine Learning for Optimal Placement of Distributed Generation	231-234
157	Automated Diagnosis of Pneumonia from Classification of Chest X-Ray Images using EfficientNet	235-239
158	Mining Significant Features of Diabetes through Employing Various Classification Methods	240-244
159	Mid-infrared Supercontinuum Generation in As2Se3 Glass Based C2H5OH Filled Square Photonic Crystal Fiber	245-248
165	Chinese Temple shaped slotted monopole UWB patch antenna for Microwave Imaging Applications	249-253
166	Unconventional Energy Harvesting from Wind Velocity and VIV Resonance Phenomenon by Using Bladeless Wind Turbine (BLWT)	254-258
188	Image Segmentation Based on Fuzzy C Means Clustering Algorithm and Morphological Reconstruction	259-263
190	Improved Image Reconstruction Using Multi frequency Data for Diffuse Optical Tomography	264-268
191	A Lightweight Convolutional Neural Network Model for Child Pneumonia Classification	269-273
194	A New Coordination Approach to Mitigate Composition Attack	274-279
197	Prediction of Hepatitis Disease Using K-Nearest Neighbors, Naive Bayes, Support Vector Machine, Multi-Layer Perceptron and Random Forest	280-284
200	Clusterization of Different Vulnerable Countries for Immigrants due to COVID-19 using Mean	285-290
	Probabilistic Likelihood Score and Unsupervised Mining Algorithms	
201	Network Repair Crew Scheduling Using Benders Decomposition Method: A Case Study of Dhaka City	291-295
217	An Approach to Improve the Accuracy of Detecting Spam in Online Reviews	296-299
219	Integrating ICT in Teaching and Learning at University Level Focusing Education 4.0	300-304
220	Development of a Smartphone-based Real Time Outdoor Navigational System for Visually Impaired People	305-310
223	Securely Transfer Information with RSA and Digital Signature by using the concept of Fog Computing and Blockchain	311-315
224	A Lightweight CNN Architecture to Identify Various Rice Plant Diseases in Bangladesh	316-320
225	Social Group Optimized Machine Learning-Based Elderly Fall detection Approach Using Interdisciplinary Time-Series Features	321-325
226	A Secret SIM Switching Technique to Adapt the upcoming Technology Trends.	326-330
229	Design and Implementation of a synchronous generator with Rotor angle stability control for damping interarea oscillations of interconnected power systems via pss	331-335
230	Application of Blockchain for the Security of Decentralized Cloud Computing	336-340
234	GPU Accelerated Tensor Computation of Hadamard Product for Machine Learning Applications	341-345
236	ADS-B Based Air Traffic Management System Using Ethereum Blockchain Technology	346-350
238	Tolerating Soft Errors using Enhanced Matrix Code	351-355

Table of Contents

Paper ID	Paper Title	Page No
239	An Anti-pattern Detection Technique Using Machine Learning to Improve Code Quality	356-360
240	A Fruit Cultivation Recommendation System based on Pearson¿s Correlation Co-efficient	361-365
245	A Blockchain-based approach to secure cloud connected IoT Devices	366-370
253	A Hybrid Collaborative Recommendation System Based On Matrix Factorization And Deep Neural Network	371-374
255	A Review on Twitter Sentiment Analysis Approaches	375-379
256	Anomaly Detection Method for Sensor network in Under Water Environment	380-384
266	A Microcontroller-based Fire Protection System for the Safety of Industries in Bangladesh	385-388
268	A Belief Rule Based Expert System to Assess Multiple Human Reaction in the Context of Facebook posts' under Uncertainty	389-394
279	Challenges of Radiation from Telecommunication Installations in Bangladesh	395-399
281	PID Controller Based Automatic Generation Control for Three Area Interconnected Power System	400-405
283	Document Level Emotion Detection from Bangla Text Using Machine Learning Techniques	406-411
285	Artificial Intelligence based Driver Vigilance System for Accident Prevention	412-416
286	Municipal Solid Wastes Based Power Generation: A Case Study in Chittagong City	417-421
288	Towards Social Group Optimization and Machine Learning Based Diabetes Prediction	422-427
289	Predicting Periodic Energy Saving Pattern of Continuous IoT Based Transmission Data Using Machine Learning Model	428-433
290	An Autonomic LASER Tag Combat Simulation System Based on IPS Using RSSI From Wireless Devices	434-439
295	A Deep Learning-Based Approach for Edible, Inedible and Poisonous Mushroom Classification	440-444
298	Design and Implementation of EEG Based Home Appliance Control System	445-449
302	A Novel Deep Learning based Sentiment Analysis of Twitter Data for US Airline Service	450-455
303	COVID-19: Update, Forecast and Assistant - An Interactive Web Portal to Provide Real-Time Information and Forecast COVID-19 Cases in Bangladesh	456-460
305	BER Performance Analysis of Different O-OFDM Techniques in VLC	461-465
306	Multi-label Bengali article classification using ML-KNN algorithm and Neural Network	466-471
307	Cybersecurity Challenges and Policy Options for Bangladesh	472-476
308	Cyber Emergency Response Team for Bangladesh	477-480
309	Prospects of Internet of Things for Bangladesh	481-485
310	Cyber-Partnership and Cyber-Alliance: Options for Developing Nations	486-490