

M. Shamim Kaiser · Juanying Xie ·
Vijay Singh Rathore
Editors

Information and Communication Technology for Competitive Strategies (ICTCS 2021)

Intelligent Strategies for ICT

 Springer

Contents

Efficient Prediction of Fake News Using Novel Ensemble Technique Based on Machine Learning Algorithm	1
M. Sudhakar and K. P. Kaliyamurthie	
Hybrid Ant Particle Swarm Genetic Algorithm (APSGA) for Task Scheduling in Cloud Computing	9
Arzoo and Anil Kumar	
Anonymization of Multi-relations Datasets Using Single Table Algorithms	21
Nisha, Archana Singhal, and Sunil Kumar Muttoo	
Analytical Performance of QO-STBC Transmission for Shadowed-Rician (SR) Fading Channels	31
Abhishek, M. K. Arti, Aarti Jain, and Prateek Anand	
Smart Health and Cybersecurity in the Era of Artificial Intelligence	41
Maheriya Arpita and Shailesh Panchal	
A Comprehensive Framework for the IoT-Based Smart Home Automation Using Blynk	49
Faraz Doja, Reenu Batra, Sandeep Tayal, Prashant Vats, and Siddhartha Sankar Biswas	
Predict Future Events Over Smart Environment Through Modified Apriori Algorithm	59
Lipichanda Goswami, Vaskar Deka, and Manoj Kumar Deka	
Imbibing Auxiliary Information Using Transfer Learning to Improve Collaborative Filtering-Based Recommender System	71
Shyamal Shah and Ronakkumar Patel	

An Efficient Resource Allocation Mechanism Using Intelligent Scheduling for Managing Energy in Cloud Computing Infrastructure	81
M. Karuppasamy, M. Jansi Rani, and M. Prabha	
Online Learning App	87
Spurthi S. Bhat and Milind V. Kulkarni	
An Efficient Underwater Image Restoration Model for Digital Image Processing	95
Jeevan J. Jacob, S. Savitha, and Debasish Mukherjee	
Molecular Dynamics Simulations Accelerate on Elastic Multi-GPU Architecture Build with FP64/TF32 Latest Streaming Multiprocessor Ampere Architecture	109
Nisha Agrawal, Abhishek Das, Rishi Pathak, Pankaj Dorlikar, and Manish Modani	
Observations and Analysis of Power Quality Indices Using Custom Power Devices in Power Distribution Network	121
Vidula S. Jape, Haripriya H. Kulkarni, Netra M. Lokhande, and Deepali Ubale	
Redefining Text-to-SQL Task as a Machine Translation Problem	131
Alaka Das	
Rainfall Data-Based Time Series Forecasting Using Rolling Forecasting Model for Indian Geographic Area	139
Nilesh Maltare, Dharmendra Sharma, and Sachin Patel	
Reforming Title Deeds via Blockchain and Challenges—Indian Perspective	147
Jyostna Grandhi, Sandeep Romana, Mahesh Patil, P. R. Lakshmi Eswari, and Nilesh Kumar	
Analysis of Various Security Schemes of Internet of Things	163
Mehul Kapoor and Puneet Jai Kaur	
Detection of Solar Panel Farms Using Machine Learning	173
Vandita Srivastava	
Design and Analysis of Band Stop Filter Using Hexagonal Split Ring Resonator for Wireless Application	181
Khyati Chavda and A. K. Sarvaiya	
Implementation of Generic Medical Device Software Integration with Multiple Protocol Support	189
Devashri Raich, Yashpal Singh, and Asha Ambhaikar	

Smart Water Management: A Learning-Based Approach 199
 V. S. Yeshwanth, A. B. Vijayalakshmi, V. Budihal Suneeta,
 and V. S. Saroja

Bank Management System Using Blockchain Technology 209
 Shrilalita Hegde, G. Aishwarya, Aishwarya Hugar, and V. B. Suneeta

Designing an Ensemble Classifier for Classifying Multi-label Data 219
 Shriya Salunkhe and Kiran Bhowmick

Ultrasonic-Based Two-Factor Authentication System for Web Applications 231
 K. S. Shashank, Aravinda Harithsa, Amogh Kuruwatti,
 Maheshwari Das, and M. S. Vinay Prasad

Long Short-Term Memory (LSTM) Layers as a Proposed Learning Algorithm for Rainfall Prediction 243
 Diptiman Senapati, Manali Narendra, Ankit Kumar, and Smita Rath

Virtual Stocks: Stock Market Simulator 253
 Khushi Khanchandani, Neha Patil, and Vineeta Bhujle

Real-Time Application for Deaf and Dumb: Bidirectional Communication Using Learning Methods 267
 G. Arun Prasath and K. Annapurani

The Selection of Electroencephalogram System for Stress Detection 277
 Nikita R. Hatwar and Ujwalla H. Gawande

Comparative Analysis on Ontology-Based Contextual Senses Approaches for Search Engine 289
 Pooja Mudgil, Pooja Gupta, Iti Mathur, and Nisheeth Joshi

Static GPS Surveys Using GAGAN SBAS Receiver for HR Satellite Photogrammetric Applications 305
 V. S. S. N. Gopala Krishna Pendyala, Hemantha Kumar Kalluri,
 and Rajashree Vinod Bothale

COVID-19 Risk Prediction with Regularized Discriminant Analysis and Lasso Regression Using Booster Tree 315
 Sadiya Sulaiman, Nader Salam, U. Barakkath Nisha,
 and R. Yasir Abdullah

Industry 4.0 Framework Using 7-layer Architecture for Smart Factory Application 323
 L. R. Sreedhanya and Sudeep Balan

Commercial Viability of Solar Thermal Hyper Distillation of Waste Water—Sainnova, A Case Study 333
 Pradnya Vishwas Chitrao, Pravin Kumar Bhojar, Komal Chopra,
 and Rajiv Divekar

Indian Tourist Recommendation System Using Collaborative Filtering and Deep Autoencoder	341
G. Ratnakanth and S. Poonkuzhali	
Developing Information Extraction System for Disaster Impact Factor Retrieval from Web News Data	357
Lakshmi S. Gopal, Rekha Prabha, and Maneesha Vinodini Ramesh	
Complexity Analysis of Wireless Body Area Networks Using Soft Computing Technique	367
Madhu Ponakala and Rakhee	
A Novel Method of Corporation Water Distribution to Smart City with IoT Devises Based on Survey	375
R. Priya and S. Gavaskar	
Neutrino Signals Throw Light on Dark Matter Searches	389
Sonali Bhatnagar	
A Comprehensive System for Smart Homes with a Minimalist Information Security Framework	401
Chandan Kumar Jha, Siddhartha Sankar Biswas, and Md. Tabrez Nafis	
CCC-Quality2: Cross-Cloud Service Composition Based on Quality of Clouds and Web Services for Business Applications	413
Kanchana Rajaram and K. Preethi Naveena Selvi	
Drone Delivery System Using GPS and Telemetry	423
Aman Anand, Saubhik Bandyopadhyay, Swapnil Das, Aasakti Agarwal, and Andrew Moitra	
A Smart Phone App with Geo-Spatial Information for Forecasting COVID-19 from Lung X-ray Images	431
K. Sujatha, N. P. G. Bhavani, K. Krishnakumar, U. Jayalatsumi, T. Kavitha, K. Senthil Kumar, V. Srividhya, and S. K. Shafiya	
Bee Basket Pvt. Ltd—An Example of Green Entrepreneurship for a Sustainable Social System	441
Pradnya Chitrao, Pravin Kumar Bhoyar, and Rajiv Divekar	
Prediction of Employee Attrition Using Stacked Ensemble Method	451
Sanjay Gowdru, Suyash Kumar Dubli, Pooja Agarwal, and Bhoomika	
Transfer Learning Approach for Diagnosing Skin Cancer with Deep Convolutional Neural Network	463
S. Poonkuzhali, B. U. Anu Barathi, and S. Vinodhkumar	
A Comprehensive Framework for IoT-Based Data Protection in Blockchain System	473
Dhyanendra Jain, Anupam Kumar Sharma, Prashant Singh, Amit Kumar Pandey, and Prashant Vats	

Nurilo is a Social Platform for the Sale and Purchase Of Framework Products Using Blockchain And Cloud Computing 485
 Atul Kumar, Aakrut Dabhi, Mohammed Kharodawala, and Karan Khunti

Error Detection and Error Concealment of Medical Images Using Frequency Selective Extrapolation (FSE) Algorithm 495
 Komal Nair, Neha Motagi, Rupali Narayankar, and P. K. Rajani

Employment of Machine Learning and Data Mining Technique in Hybrid Recommender System: A Comprehensive Survey 505
 Indu Hariyale, M. M. Raghuwanshi, and Kavita R. Singh

GRAB Thought Model of Consciousness for Classifying Thoughts and Identifying Mental States 515
 R. J. Ramteke and S. S. Gharde

An Approach to Perceive Session Hijacking in IoT Health Care 525
 S. Sarika

A Graphical-Based Video Steganography for Information Security 535
 Payal Bose, Shawni Dutta, Vishal Goyal, and Samir Bandyopadhyay

Interactive Search Group Mining from Annotated Web Pages 545
 P. Sijin and H. N. Champa

IPD—An Investment Portfolio Detector Using SEBI API 555
 M. S. Karthika Devi, R. Bhuvaneshwari, K. Kavin Pragadeesh, and Baskaran Ramachandran

Cloud-Based Patient Health Information Exchange System Using Blockchain Technology 569
 Prashant Singh, Dhyanendra Jain, Anupam Kumar Sharma, Ashu Jain, and Prashant Vats

Detection of Faulty Steel Used in Construction Industry Using Machine Learning Algorithms 579
 S. Poonkuzhali, P. Revathy, E. Mohana, and M. Shobana

Identification of MRI-Based Adenocarcinoma Tumours with 3-D Convolutionary System 587
 Manu Phogat, Prashant Vats, Balwant Kumar, Preeti, and Sandeep Singh

Does Stock Exchange Influence Economic Growth? An Exploratory Study from the Prospective of Gambia 599
 Malick Jeng, Mohit Pathak, and Arti Chandani

Digitization of Measuring Scales in Social Science Research Area 609
 Mahesh Bapusahab Toradmal, Mita Mehta, and Arti Chandani

Intelligent IoT-Based Monitoring Rover for Smart Agriculture Farming in Rural Areas	619
Aishwarya Girish Menon and M. Prabhakar	
Wireless Sensor Network-Based Automation of Irrigation in India	631
Dinesh Kumar Kalal and Ankit Bhavsar	
Data Integrity Verification Schemes in Cloud Computing Environment: A Survey	641
Jyoti Rani and Rajender Nath	
Automatic Brain Tumor Segmentation on Pre-operative MRI using Region Growing Algorithm	653
K. V. Shiny and N. Sugitha	
Cooperative Multi-Agent Nash Q-Learning (CMNQL) for Decision Building in Retail Shop	667
Deepak A. Vidhate and Parag Kulkarni	
Real-Time Patient Monitoring System and Security Using Internet Protocols for Medical Industry	677
Muhammad Abul Kalam and R. Udayakumar	
Reconnaissance for Penetration Testing Using Active Scanning of MITRE ATT&CK	693
S. Mayukha and R. Vadivel	
Data Sharing Approach for Personal Health Record by Session Password and Access Key in Cloud Storage	707
J. Naveen John and I. Shatheesh Sam	
Stock Market Prices and Returns Forecasting Using Deep Learning Based on Technical and Fundamental Analysis	717
Varun Vora, Manav Shah, Aryan Chouhan, and Prachi Tawde	
Data Encryption Basing on the Existence of Eulerian Circuits in a Group of Random Graphs	729
M. P. R. Murthy, G. Lalitha Devi, S. Sarva Lakshmi, and Ch. Suneetha	
Centralized Library Management System: An E-governance Approach for Improving Accessibility of Library Resources of Bangladesh	741
Faiyaz Ahmed, Rupok Chowdhury Protik, and Mahady Hasan	
A Review on Single-Phase Integrated Battery Chargers for Electric Vehicles	751
K. Sreeram, Sreehari Surendran, and P. K. Preetha	
Investigating Gammatone Filterbank-Based i-Vectors for Speaker Verification Task	767
Asmita Nirmal and Deepak Jayaswal	

A Survey on In-Order 5-Stage Pipeline RISC-V Processor Implementation 777
Jayashree Mallidu and Saroja V. Siddamal

Image Matching Techniques: A Review 785
Ramandeep Kaur and V. Devendran

Model-Based Design Technique to Monitor Vehicle Exhaust Emissions 797
Venkatesh Mane, P. Vishal, P. Nikita, Nalini C. Iyer, and K. Ashwini

Author Index 805