

Table of Contents

A Method for Examining and Reducing Malicious URL Connections by Machine Learning <i>Saima Siraj Qureshi, Jingsha He, Siraj Uddin Qureshi, Nafei Zhu, Hina Shafi, Ahsan Wajahat and Ahsan Nazir</i>	1
ARTIFICIAL INTELLIGENCE TECHNIQUES IN IMPROVING THE QUALITY OF SERVICES PROVIDED BY E-GOVERNMENT TO CITIZENS <i>Mohammad Alqudah and Mudasar Ali Rind</i>	7
Determining the Impact of Artificial Intelligence on Modernization of Education..... <i>Rind Mudasar Ali, Pirali Aliyev and Mohammad Ali</i>	11
IoT Based Systems and Services: Recent Security Concerns and Feasible Solutions..... <i>Hafiz Muhammad Attaullah, Shahzad Ahmed Memon, Ozlem Feyza Erkan and Ruba Khawar</i>	14
Designing and Evaluating a Mobile Social Robot as an Intervention Tool for Autism Spectrum Disorder <i>Iraj Habib, Muhammad Jahanzeb Matloob, Hafiz Muhammad Attaullah and Ruba Khawar</i>	20
A Novel Hybrid Genetic and A-star Algorithm for UAV Path Optimization..... <i>Danish Mehmood, Asharab Ali, Seerat Ali, Farzana Kulsoom, Hassan Nazeer Chaudhry and Ammar Zeb Ul Haider</i>	25
Banking in the Digital Age: Predicting Eligible Customers through Machine Learning and AWS <i>Asfand Ali, Asim Irfan, Ali Raza and Zainab Memon</i>	30
EEG-BASED HUMAN EMOTION RECOGNITION USING DEEP LEARNING..... <i>Hamza Ahmed, Zobia Ali, Sanam Narejo, Asim Irfan and Danish Azeem</i>	36
Multi-Modal Hate Speech Recognition Through Machine Learning..... <i>Asim Irfan, Danish Azeem, Sanam Narejo and Naresh Kumar</i>	43
Efficient Load Control with Smart Meters: A Step Towards Grid Stability <i>Murtaza Ali Khooharo, Nimra Nawaz and Munsif Ali Soomro</i>	49
A Computer Vision-Based Vehicle Detection System Leveraging Deep Learning..... <i>Saadullah Khan, Sanayna Vohra, Dr.Abdul Ahad Abro, Sultan Abdullah Siddique and Dr. Mansoor Ebrahim</i>	55
AuctiSafe: Building a Robust and Reliable Auction System for Optimized Security Measures..... <i>Wajiha Jawwad Ali, Abdul Qadir, Muhammad Yasir, Ibrar Ali, Mansoor Ebrahim and Abdul Ahad Abro</i>	62
Unveiling the Arsenal of User Data Protection Tools and Practices <i>Syed Moiz Musharraf, Abdul Ahad Abro, Mansoor Ebrahim and Abdul Basit Abro</i>	68
Security and Threat Detection through Cloud-Based Wazuh Deployment <i>Syed Moiz Musharraf, Abdul Majid Jamil, Abdul Basit Abro, Abdul Ahad Abro, Mansoor Ebrahim and Mehwish Naem</i>	75

A Blockchain-Powered Loan Management System Enhanced with Smart Contract	80
<i>Muhammad Saleem, Muhammad Haris, Mehwish Naeem, Abdul Basit Abro, Maaz Ahmed and Abdul Ahad Abro</i>	
Lane Detection in Autonomous Driving: A Comprehensive Survey of Methods and Performance	85
<i>Minahil Zaidi, Hamza Daud, Malaika Shafique and Hira Ali Jamal</i>	
A Simplified Protection Scheme for Renewable Energy Integrated AC Microgrids	91
<i>Muhammad Talha Shahab, Syed Zain Abbas and Ahmad Usman</i>	
Review of National Cybersecurity Policies: A Case Study on Asian Countries.....	97
<i>Hera Noor, Dr Dodo Khan and Dr Syed Abbas Ali</i>	
Role of Telemedicine Technology to Combat Contagious Diseases in Pakistan and People's Acquiescence Towards it.....	103
<i>Sadia Arshad, Muhammad Rizwan, Tooba Khan, Muhammad Zeeshan Ul Haque and Muhammad Wasim Munir</i>	
A PSS/E based Voltage Stability Assessment Toolbox (P-VSAT) with Automated Network Modeling	108
<i>Muhammad Ali Siddiqi, Hamna Mansoor Rafi, Hammam Abid and Syed Muhammad Hur Rizvi</i>	
A Python-based Open-source Distribution Network Analysis ToolBox for Automated Modeling, Analysis and Visualization.....	114
<i>Rida Zehra, Sumaira Khan, Daniyal Lightwala and Syed Muhammad Hur Rizvi</i>	
Cyber Security Risk Assessment Methods for Smart Healthcare.....	121
<i>Sumaira Memon, Shahzad Memon and Lachhman Das Dhomeja</i>	
MQTT Based Intelligent IoT Monitoring and Notification System for Enhanced Comfort of Learning Spaces	127
<i>Ahmad Bilal, Zareen Tabassum, Hira Mustafa, Haseeb Khan and Saad Umer Baig</i>	
Cognitive Analysis based on Brain Connectivity for Learning Task fMRI Data using CONN Software Package.....	133
<i>Munsif Jatoi, Sadam Hussain Teevino and Fayaz Ali Dharejo</i>	
Technical Feasibility Study of 150 kW Grid-Connected PV System for an Academic Institution in Pakistan	139
<i>Abbas Javeed, Waqas Ali, Muhammad Usman Aslam, Usman Ali, Haroon Farooq and Muhammad Umer Ramzan</i>	
Hybrid Deep Learning Model for Multilingual Sentiment Analysis	145
<i>Rishav Negi, Azhar Ashraf and Satbir S Sehgal</i>	
Web Based Online Car Rental System.....	151
<i>Vikash Chaudhary, Sugandhi Midha and Rajesh Bahuguna</i>	
Virtual Assistant in Health Care	159
<i>Ayush Kumar Sahu, Steve Samson and Tarun Parashar</i>	
Predicting Depression with Social Media Images.....	167
<i>Shivangi Shivangi, Sangeeta Sangeeta and Reeta Rautela</i>	

Design a conceptual model: predictors influencing the acceptance of ChatGPT usage in the academia of underdeveloped countries	175
<i>Hifazat Ali Shah Masoomi, Nasrullah Dharejo, Abid Ali Shah Syed, Fatima Dayo and Ghulam Murtaza</i>	
Revolutionizing Technology: The Era of AI-Based 3DPrinted Humanoids.....	180
<i>Hamadullah Hamadullah, Asim Irfan, Abdul Hadi and Atif Nawaz</i>	
Recycling and Material Extraction from End-of-Life Photovoltaic Modules Waste: Exploring Physical Recovery Techniques.....	186
<i>Amjad Ali, Hassan Sahaf, Atif Alzahrani, Muhammad Khalid, M. Waseem Khan Khan and Asif Islam</i>	
Comparative Analysis of Software Testing Methodologies in the Age of Software-Defined Machines.....	193
<i>Tazeen Nasir and Amjad Ali</i>	
Digital Prototyping and Simulation of a Humidity Control Robot for Tunnel Farming	198
<i>Syeda Fakhra Jalal, Zarish Majid Shaikh, Tooba Khan and Muhammad Wasim Munir</i>	
PYTHON & DJANGO – THE FASTEST GROWING WEB DEVELOPMENT TECHNOLOGY.....	202
<i>Manoj Sharma, Mohammad Shuaib Khan and Jitendra Singh</i>	
Detection and Prevention of DoS Attack in VANET Using Artificial Neural Network	211
<i>Md Adil, Sugandhi Midha, V.K Srivastav and Kavita Kavita</i>	
Diabetic Retinopathy Detection Using Voting Classification Method.....	218
<i>Mohd. Akram, Dr. Pooja Sharma and Kavita Kavita</i>	
Image Refocusing – Using Unsupervised Learning and Depth Estimation	229
<i>Kashish Galhotra, Azhar Ashraf and Hiral Singh</i>	
Heart disease Prediction Using Data Mining Techniques.....	235
<i>Shubang Sharma, Gurinder Singh and Poonam Negi</i>	
User Interface based Text-To-Speech Synthesizer	241
<i>Yatesh Khandelwal, Reema Goyal and Poonam Negi</i>	
Security Challenges in Mobile Cloud Computing.....	249
<i>Ravinder Ravinder, Mohammad Shuaib Khan and Jitendra Singh</i>	
Smart Web Dictionary using OCR (Optical Character Recognition)	258
<i>Sahil Verma, Azhar Ashraf, Babita Rawat and Atul Malhotra</i>	
A Study on Employee Competency Management System	265
<i>Sarthak Sarthak, Gagandeep Kaur, Maninder Kaur and Babita Rawat</i>	
Heart Disease Diagnosis using Deep Learning.....	272
<i>Ram Kumar, Divya K and Sahil Verma</i>	
Virtual assistance using Python.....	279
<i>Mehak Garg and Sahil Verma</i>	
Impact of Blockchain Technology on Financial Services.....	284
<i>Mohit Sharma, Mradula Sharma and Babita Rawat</i>	

STOCK PRICE PREDICTION USING LSTM NEURAL NETWORK STOCK PREDICTION (AMZN, MSFT, TSLA, AAPL)	290
<i>Akhil Dhingra, Divya K and Kavita Kavita</i>	
NFT Marketplace: what are NFTs, and how does OpenSea succeed in acquiring the most of the NFT space.....	300
<i>Anil Thakur, Divya K., Sahil Verma and Maninder Kaur</i>	
Artificial Intelligence & Justice Delivery System in India: A Symbiotic Relationship of Effectiveness.	307
<i>Abhiranjan Dixit and Nimit Saroha</i>	
The Use of AI in Surveillance to Identify the Potential Threat of Terrorist Attacks	312
<i>Malvika Sharma, Abhiranjan Dixit and Dr. Poonam Rawat</i>	
Role of IT in Management of Waste -Industry 4.0	319
<i>Meera Sharma, Minakshi Sharma, Upasana Rana, Shivani Sisodia, Hiral Singh and Gotte Ranjith Kumar</i>	
Role of Artificial Intelligence in Education Sector	327
<i>Saurabh Dhyani, Isteyaaq Ahmad, Aditya Gupta, Swati Singh, Abhishek Kumar Pathak and Nagendar Yamsani</i>	
LEVERAGING ADVANCED TECHNOLOGY AND DESIGN THINKING TO ADDRESS CHALLENGES FACED BY INDIAN ADOLESCENT YOUTH	336
<i>Ayush Chandrol, Janvi Janvi, Monisha Awasthi, Vijayalaxmi Sajwan and Nagendar Yamsani</i>	
Ethics in the era of Intelligent Machines: Legal Perspective and Regulatory Implications..	343
<i>Divya Rawat, Dharmendra Kumar, Amaarjeet Rawat, Akhilesh Pandey, Gautam Chauhan and Srinivas Aluvala</i>	
Designing a better food system in India: A Design Thinking Approach	350
<i>Akhilesh Pandey, Sameer Dev Sharma, Ankita Rawat, Divya Dalakoti and Gotte Ranjith Kumar</i>	
Blue Brains – The Future Generation	357
<i>Manisha Khanduja, Divya Pandey, Devanshi Adhikari, Harshit Gupta and G Sunil</i>	
Assessing the Effectiveness of Fingerprint Authentication in Preventing Fraud During Financial Transactions	363
<i>Disha Verma, Sonal Sharma, Monisha Awasthi, Ayush Chandrol and G Sunil</i>	
Application of Metaverse in Education	370
<i>Anjali Jalhotra, Sonal Sharma, Sameer Dev Sharma, Abishek Pathak and Ayapal Lande</i>	
A comparison and analysis of various cloud computing deployment models.....	378
<i>Mr. Sanjay Mishra, Dr. Monisha Awasthi, Ayush Chandrol, Garvit Singh and Ayapal Lande</i>	
Advancements of Emerging Technologies in Biometrics Authentication.....	385
<i>Ms. Swati Singh, Prof. Dr. Sonal Sharma, Dr. Monisha Awasthi, Shreyansh Rawat and Yerrolla Chanti</i>	

AI IN CLASSROOMS	392
<i>Ms. Vyeshikha Vyeshikha, Ms. Manisha Saini, Yogesh Juyal, Ojaswini Mahendru and Bura Vijay Kumar</i>	
Understanding Human Behavior in Phishing Attacks Across Diverse User Groups: An Ethical Hacking Analysis.....	399
<i>Fahad Hussain, Rayyanur Rahman, Zainab S. Attarbashi, Wafa Hussein Naser Fadaq and Manar Mustafa</i>	
Navigating the Cloud: Choosing the Right Cloud Computing Services for Your Business..	406
<i>Shivani Sisodia, Sonal Sharma, Dharmendra Kumar, Lotus Biswas and Srinivas Aluvala</i>	
TaxBot: An AI-driven Chatbot for Resolving Double Taxation Queries in India	414
<i>Parthik Baliyan, Bhawna Arora and Kavita Kavita</i>	
Roman Urdu Slang Dictionary Development for Facebook Comment Sentiment Analysis..	420
<i>Umair Jamil Ahmad and Yasir Arfat Malkani</i>	
Comparative analysis of OFDM in AWGN & Local Acoustic Channel	424
<i>Areeb Ahmed, Aish Siddiqui, Rehan Khan, Ghulam Nabi and Murtaza Ali</i>	
Authentication in the Internet of Things: A Review	428
<i>Razia Nisar Noorani and Yasir Arfat Malkani</i>	
Data Security, Privacy and Cyber Policy of Pakistan: A Closer Look	433
<i>Lubna Luxmi Dhirani</i>	
2D T1-Weighted CE MRI Images Classification with Hybrid Channel Attention Block enhanced VGG-16 and MobileNet	440
<i>Mohammad Jawad Fareed, Assoc. Prof. Charnchai Pluempitwiriwaj and Ghulam Murtaza</i>	
Ransomware Detection Techniques Using Machine Learning Methods.....	446
<i>Shuaib Ahmed, Yichiet Aun, Ming Lee Gan, Chen Kang Lee, Sijjad Ali and Rehan Akbar</i>	
Interoperability: Blockchain's Solution to SOA & Traditional Service-Based Integration Challenges	452
<i>Zia Ahmed Shaikh, Kamran Dahri, Azar Akbar Memon, Shazma Tahseen, Faheem Ahmed and Khalil Khoumbati</i>	
A Conceptual Framework For Determinants Of The Student Advisory System At The University Of Nizwa Oman.....	457
<i>Imran Khan Keerio, Yaqoob Khamis Al-Anbari, Nusratullah Khan, Kajal Nusratullah, Asadullah Shah, Mzm Khedher, Aidrina Binti Mohmed Sofia Din and Muhamad Sadry Abu Seman</i>	
DESIGN AND DEVELOPMENT OF IOT BASED SMART ENERGY MANAGEMENT SYSTEM FOR DOMESTIC USERS.....	463
<i>Nisha Nenuwani, Shoaib Ahmed Khatri, Nayyar Hussain Mirjat, Aliza Fatima and Usama Iqbal</i>	
Threats and Vulnerabilities of Wireless Networks in the Internet of Things (IoT)	467
<i>Khalid Hussain, Adib Rahman Rahmatyar, Basheer Riskhan, Md Amin Ullah Sheikh and Siva Raja Sindiramutty</i>	

Cyber Security Assessment and Awareness: A Statistical Modelling Approach	475
<i>Suman Srivastava and Snehil Raj</i>	
FILE SHARING THROUGH CLOUD-BASED SYSTEMS UTILIZING BLOCK CHAIN TECHNOLOGY	481
<i>Suman Srivastava and Snehil Raj</i>	
Improvement of a Two-Tier ATM Security System: Aiming to Deliver a Timely Resolution for Network Challenges	487
<i>Tara Rani Agarwal and Nikita Thakur</i>	
Measurements of Security Metrics for Wireless Communications	492
<i>Suman Srivastava and Snehil Raj</i>	
Quantification of Reliability in Object-Oriented Software: Functionality Perspective	498
<i>Anuj Kumar Yadav and C L P Gupta</i>	
Implementation of Artificial Intelligence in Agriculture: An Empirical Approach	504
<i>Bhagyashree Sungh and Pragya Bharti</i>	
Integrity Evaluation Model for Object Oriented Software: A Developer Perspective	510
<i>Vivek Gupta and Clp Gupta</i>	
Examining digital forensics in the context of Shamoan attack behavior within fog computing and exploring threat intelligence for Incident Response	516
<i>Tara Rani Agarwal and Nikita Thakur</i>	
Business Intelligence Systems' Effect on Start-Up Companies' Decision-Making and Excellence Management Processes	523
<i>Harshit Sharma, Purushottam Kumar Arya and Anshika Agarwal</i>	
Formal Modeling and Verification of IoT-based Smart Transport System using SPIN Model Checker	529
<i>Muhammad Rashid, Muhammad Qadeer, Husnain Raza, Ifra Shabbir, Imran Rasool and Nazir Ahmad Zafar</i>	
Formal Modeling and Verification of Justification and Finalization of Checkpoints in Ethereum 2.0 Beacon Chain	535
<i>Muhammad Rashid, Imran Rasool, Nazir Ahmad Zafar and Hamra Afzaal</i>	
Formal Verification and Validation of IoT-based Railway Gate Controlling System at Level Crossing	541
<i>Muhammad Rashid, Muhammad Qadeer, Husnain Raza, Ifra Shabir, Imran Rasool and Nazir Ahmad Zafar</i>	
Live synchronization with less downtime	547
<i>Reshman Siyal and Jun Long</i>	
Exploring Relationships among Bitcoin's Market Price, Energy Consumption and Carbon Dioxide Emissions: A Machine Learning Approach	553
<i>Aadil Jamali, Najma Imtiaz Ali, Imtiaz Ali Brohi, Nadeem Ahmed Kanasro, Muhammad Umar Murad and Asad Ali Jamali</i>	

Efficient Convolutional Neural Network (CNN) based Architecture for the Diagnosis of Foliar Pathologies in Potato Crops	559
<i>Syed Muhammad Daniyal Murtaza Zaidi, Razi Haider and Farhan Khan</i>	
Comprehensive Security Analysis and Threat Mitigation Strategies for React.js Applications: Leveraging SonarQube for Robust Security Assurance	565
<i>Syed Muhammad Daniyal Murtaza Zaidi, Razi Haider and Farhan Khan</i>	
Investigation of Classification Model for Text-Based Sentiment Analysis	571
<i>Ian Cedric Ng Man King, Chenyang Li, Yan Qin Teoh, Humaira Ashraf, Uswa Ihsan and Satbir S Sehgal</i>	
Social media text sentiment analysis: Exploration of machine learning methods	579
<i>Fan Xing, Humaira Ashraf, Uswa Ihsan, Navid Ali Khan and Rajesh Bahuguna</i>	
Emotion Prediction in Amazon Kindle Book Reviews: Leveraging RNN for Sentiment Analysis	585
<i>Lyu Hao, Humaira Ashraf, Hussain Jazri and Tarun Parashar</i>	
Sentiment Analysis System for Image and Text Based Social Media Data	591
<i>Hu Baoyue, Humaira Ashraf, Nz Jhanjhi and Reeta Rautela</i>	
Facial Expression Recognition (FER) System using Deep Learning	598
<i>Ooi Juin Yan, Humaira Ashraf, Uswa Ihsan, Nz Jhanjhi, Sayan Kumar Ray and Rohan Kumar</i>	
Security Threats and Countermeasure for IOT Based Library Management System	609
<i>Anam Kalhoro, Najma Imtiaz Ali, Imtiaz Ali Brohi, Shadab Kalhoro, Maryam Kalhoro and Noor Afzan Salleh</i>	
A COMPARATIVE STUDY OF AUTOMATIC HATE SPEECH DETECTION USING MACHINE LEARNING	614
<i>Jawaid Ahmed Siddiqui, Siti Sophiayati Yuhaniz and Zulfiqar Memon</i>	
Decoding Digital Hostility: Examining and Addressing Hate Speech on Social Media Platforms	621
<i>Jawaid Ahmed Siddiqui, Siti Sophiayati Yuhaniz and Zulfiqar Memon</i>	
Deep Radiomics: A picture is worth a thousand words - A Review	626
<i>Syeda Meraj, Asadullah Shah, Ahsiah Ismail, Tengku Sembok, Syed Shadab, Syed Aftab, Syeda Nageena, Nusratullah Khan and Kajal Nusratullah</i>	
Investigating Bigdata Analytics Adoption in Higher Education: Pilot Study	632
<i>Noor Afzan Salleh, Asadullah Shah, Samar Raza Tapur, Hazirah Bee Yusof Ali, Najma Imtiaz and Che Rosmawati Che Mat</i>	
i-Know: Revolutionizing Knowledge Management with Interactive Quizzes	638
<i>Zahidah Zulkifli, Muhammad Darwish Abdul Halim, Arief Iskandar Shaffei and Nisrin Alsaiari</i>	
Harvesting Prosperity: AI-Powered Solutions for Household Poverty Reduction through Smart Agriculture	644
<i>Muhammad Abrar-Ul-Haq, Jayendira P Sankar, Farheen Akram and Hafiz Abid Mahmood Malik</i>	

A Comprehensive Survey of Software Defined Networking and its Security Threats 649
Iftexhar Ahmed Mahar, Wu Libing, Zulfikar Ahmed Maher and Ghulam Ali Rahu

Aligning AI-Led Smart Manufacturing with SDGs for Poverty Reduction 654
Muhammad Abrar-Ul-Haq, Jayendira P Sankar, Farheen Akram, Gazi Md Nurul Islam, Hafiz Abid Mahmood Malik and Kashif Akram

Dielectric Characterization for Secure and Reliable High-Frequency Printed Circuit Board Applications 660
Sayed Md Tashfi Nowroz, Fathi Amsaad and Nz Jhanjhi

Analyzing the Parallel Computing Performance of Unsupervised Machine Learning 665
Vishnu Vardhan Baligodugula, Fathi Amsaad and Nz Jhanjhi

SRAM PUFs: A Study of Aging Impact and Potential Mitigation 671
Niraj Prasad Bhatta, Sufian Al Majmaie, Fathi Amsaad, Nz Jhanjhi and Tariq Rahim Soomro