Dr. MAMOONA HUMAYUN

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Career Objective

My aim being an experienced teacher and researcher in an educational organization would be to render my knowledge, experience, and expertise in all aspects starting from organizational management, academic quality , policy making to proper molding of students in terms of teaching them the values and principals of life.

Summary

I have completed my PhD. in Computer Sciences from Harbin Institute of Technology, China. I have **15** plus years of teaching and administrative experience internationally with extensive background of teaching, research supervision and administrative work. I also have experience in teaching advanced era technological courses besides other undergraduate and postgraduate courses, graduation projects and thesis supervisions. I am the guest Editor and reviewer for several reputable journals and conferences around the globe. I have authored several research papers, supervised a great number of postgraduate students, and external thesis examiner to my credit. I possess strong analytical, problem solving, interpersonal and communication skills. My Research interest include Artificial Intelligence and Healthcare, Cybersecurity and Secure Systems, Predictive analytics for chronic disease management, Data Analysis and AI for Disability Advocacy, AI and IoT integration for remote patient monitoring, Secure software development solutions, and Internet of Things.

Research Statistics

Total Number of Publications: 250+

Total Number of Journal Papers: 150+

Total Number of Conference Papers: 25+

Total Number of book Chapters: 25+

Total Number of books: 7

Total Number of Patents: 3

Research Grants: 20+

Cumulative Impact Factor: 300+

Cumulative Google Citation: 9000+

Research Gate (RG) Score: 5000+

Full list of publications:
https://scholar.google.com/citations?user=uVz3ZM0AAAAJ&hl=en

Academics

June 2011 – July 2014	**PhD. (Computer Science) Harbin Institute of Technology**
Jan 2008 – Feb 2011	**Master of Science (Software Engineering) International Islamic University, Islamabad, Pakistan.** CGPA. 3.55/4
Aug 2002 – Oct 2005	**Master of Computer Science, International Islamic University, Islamabad, Pakistan.** CGPA. 3.44/4
May 2000 – July 2002	Bachelor of Science (**Mathematics) F.G College for Women F-7/2, Islamabad, Pakistan** *(Got Roll of Honor)*

Career History

June 2024- to Date	**University of Roehampton, London, United kingdom.** Currently serving as a **Senior Lecturer** in the Department of Computing, School of Computing, Engineering and the Built Environment, University of Roehampton, London, SW15 5PJ, United Kingdom. Some of the major tasks and achievements are: **Research and Development & Achievements** • Teaching various courses to graduate and post graduate students of Computing • Module leader for the course of secure software development • Teaching and Supervising Masters' research students • Teaching and Project Supervising to BS students • Students' academic advisors

Aug 2016- to June 2024	### Jouf University, Al-Jouf, Kingdom of Saudi Arabia

Served as an **Assistant Professor** in the Department of Information systems, College of Computer and Information Sciences, Jouf University, KSA. Some of the major tasks and achievements are:

Research and Development & Achievements

- Teaching BS Software Engineering/BS Information Systems/Master of Cyber security courses
- Selected as distinguished researchers for the year 2021/2022
- Second best researcher award in the college of Computer and Information Sciences
- Secured a research grant Twenty times from Jouf University as a Principal Investigator and Co-PI.
- Female coordinator of ABET
- Female coordinator of Seminars and Training
- Active member of College Research Committee
- Member of BS projects committee
- Teaching and Supervising Master of Cyber Security research students
- Teaching and Project Supervising to BS information system students
- Reviewer of IEEE ICCIS 2019 conference at Jouf University.
- Students' academic advisor
- Conducted various seminars, trainings and workshops to facilitate students and faculty members.

Apr 2014 – August 2016	### PMAS-Arid Agriculture University, Rawalpindi, Pakistan

Served as an **Assistant Professor** in the Department of Computer Science, University Institute of Information Technology, PMAS-Arid Agriculture University, Rawalpindi, Pakistan.

Some of the major tasks and achievements are:

Research and Development & Achievements

- Teaching various courses related to the Software Engineering to BSCS/MSSE/PhD(SE)
- Supervised thirteen MS and two PhD students, All MS students and one PhD student have successfully defended research thesis

Committees

- Computer Labs Coordinator (monitoring lab activities)
- Master of Science(MS) Coordinator
- Member of College Discipline Committee, to help and address the disciplinary related issues of the School. .
- Member of Faculty short listing Committee

Dec 2006 to Aug 2011	### Islamabad Model College for Girls, G-10/4 ,Islamabad, Pakistan

Served as **Lecturer** in Department of Computer Science with teaching vis-à-vis academic administrative responsibilities summarized as follows:

- Teaching
- Project supervision
- Evaluating practical of graduation students

- Computer Labs Coordinator
- Member of Furniture and fixing Committe

Feb 2013 to June 2013	**International Islamic University Islamabad**
	Served as **Visiting faculty Teacher** in **Software Engineering Department.**
	My responsibility was to teach the course of **Formal Methods in SE** to BS Software engineering students and **Requirement Engineering** course to the students of Master in Software Engineering

Aug 2005 to Dec 2005	**SZABIST, Islamabad**
Feb 2013 to June 2013	Served as **Visiting faculty Teacher** in **Computer Science Department.**
	My responsibility was to teach the courses of **Discrete Mathematics** and **Linear Algebra and differential equations** to the students of BS Computer Science

March 2006 to Dec 2006	**F.G.G Model School G-7/2 Islamabad.**
	Served as **Computer Science Teacher.**
	My responsibility was Teaching Computer Science to grade 9th and 10th

March 2006 to Dec 2006	**Socio Engineering Consultant, Islamabad**
	Served as **Research Internee.**
	My responsibilities include

- In depth study of existing management system of resource center.
- Designing and development of computer based data management information system.
- Development and management of CV pool.
- Training of R&D assigned person in newly designed data management information system

Research & Development: (**I. Patents**)

1	Patent Number: JP 3242106 U 2023.5.26: Anand Nayyar, Noor Zaman Jhanjhi, **Mamoona Humayun**, Maram Fahaad Almufareh, Internet of Things Based Device for Monitoring and Control of Mechanical Systems, Japanese Patent, May, 2023. Status Granted. (https://www.j-platpat.inpit.go.jp/p0000)	Japanese Patent
2	Patent Number: JP 3242105 U 2023.5.26: Anand Nayyar, Noor Zaman Jhanjhi, **Mamoona Humayun**, Ghadah Naif Alwakid, IOT-based Innovative Actuator Design for Enhanced Performance, Japanese Patent, May 2023. Status Granted. (https://www.j-platpat.inpit.go.jp/p0000) Application Number: 2023-000959	Japanese Patent
3	GB Patent 6,305,806: H Akbar, NZ Jhanjhi, **H Mamoona**, A Ghadah Naif, R Sayan Kumar, "Autonomous Delivery Robot" September 2023.	UK Patent

Research & Development: (**II. Funded Research Grants**)

1	Funded Research project (KSRG -2023-085) titled "Role of cutting edge technologies in disability Diagnosis" from King Salam centre for disability Research(Completed Successfully) (2023).	CO-PI
2	Funded Research project (KSRG-2024-063) titled "Utilizing AI Techniques to Enhance Support for Individuals with Disabilities" from King Salam centre for disability Research (In progress) (2024)	CO-PI
3	Funded Research project (KSRG-2024-055) titled "Artificial Intelligence-Based Transformation of Disabilities into Abilities in Individuals with Special Needs through Advanced Communication Protocols and the Internet of Things" from King Salam centre for disability Research(In progress) (2024)	CO-PI
4	Funded Research project (KSRG-2024-050) titled Predictive Modeling for Early Autism Spectrum Disorder Diagnosis in Children" from King Salam centre for disability Research (In progress) (2024)	CO-PI

5	Funded Research project (KSRG-2024-139) titled "Empowering Disability Care through AI: Personalized Diagnosis, Monitoring, and Treatment" from King Salam centre for disability Research (In progress) (2024)	CO-PI
6	SoftMatrix and Surveillance (SMS) - The project SMS (51325) is funded by Northumbria University UK under its Pump Priming Grant	CO-PI
7	NGAGE (Continuous Engagement Monitoring in Virtual Classrooms – 2022. The project ENGAGE (474239) is funded by Northumbria University UK under its Pump Priming Grant	CO-PI
8	Funded Research project (DSR2022-RG-0105) titled "Contextual sentiment analysis for social media" from Jouf University (In progress) (2022)	Principal investigator
9	Funded Research project (2022/02/19836) titled "A Blockchain-Enabled Framework for Improving the Software Audit Process" from Prince Sattam bin Adulaziz University (Completed Successfully) (2022)	CO-PI
10	Funded Research Project (DSR2023-NF-09) titled "Fraud detection and prevention for healthcare claim processing using cutting-edge technologies" from Jouf University (Completed Successfully) (2023)	Co-PI
11	Funded Research Project (DSR2022-NF-03) titled "Moderating factors for Software Security and Performance Verification" from Jouf University (Completed Successfully) (2022)	Co-PI
12	Funded Research project (DSR-2021-02-0323) titled "Real time Security, health and Privacy monitoring for Saudi Highways Using Cutting-edge Technologies" from Jouf University (Completed Successfully) (2021)	principal investigator
13	Funded Research project titled (DSR-2021-02-0324) "Logic learning machine for smart traffic system" from Jouf University (Completed Successfully) (2021)	principal investigator
14	Funded Research project (DSR-2021-02-0325) titled "Smart Traffic management system for metropolitan cities of kingdom using cutting edge technologies" from Jouf University (Completed Successfully) (2021)	principal investigator
15	Funded Research project titled (DSR-2021-02-0326) "Agent based medical health monitoring system" from Jouf University (Completed Successfully) (2021)	principal investigator
16	Funded Research project (DSR-2021-02-0327) titled "Autonomous traffic system for emergency vehicles" from Jouf University (Completed Successfully) (2021)	principal investigator
17	Funded Research project (DSR-2021-02-0328) titled "Superlative feature selection based image classification using deep learning in medical imaging" from Jouf University (Completed Successfully) (2021)	principal investigator
18	Funded Research project titled (DSR-2021-02-0329)"A Deep Learning Framework for Cancer Risk Prediction" from Jouf University (Completed Successfully) (2021)	principal investigator
19	Funded Research project titled (DSR-2021-02-0330) "A transfer learning approach with convolutional neural network for classification of lung disease" from Jouf University (Completed Successfully) (2021)	principal investigator
20	Funded Research project titled (DSR-2021-02-0331)"Securing Drug Distribution System from tampering using Blockchain" from Jouf University (Completed Successfully) (2021)	principal investigator
21	Funded Research project (DSR-2021-02-0332) titled "Green energy systems for smart cities using IoT" from Jouf University (Completed Successfully) (2021)	principal investigator
22	Secured funding (DSR2020-04-1533) for the funded project titled "Prediction Model for Coronavirus Pandemic using Deep Learning" in 2020 from Jouf University (Completed Successfully)	principal investigator
23	Secured a funding for the funded project (Number: 40/222) titled "Internet of Things (IoT) context: Proposing Secure and Energy Efficient Scheme for E-health applications" from Jouf University in 2019 (Completed Successfully)	principal investigator
24	Secured a funding to write an MCQ's based book project (39/104) titled "A quick Revision of Software Engineering" from Jouf University in 2018 (Completed Successfully)	principal investigator

Research & Development :(**III. SCIE/SCI /Impact Factor Journal Papers**)

Ali, Sijjad, Shuaib Ahmed Wadho, Kazim Raza Talpur, Bandeh Ali Talpur, Khulud Salem Alshudukhi, Mamoona Humayun, Samar Raza Talpur et al. "Next-Generation Quantum Security: The Impact of Quantum Computing on Cybersecurity—Threats, Mitigations, and Solutions." Computers and Electrical Engineering 128 (2025): 110649. https://doi.org/10.1016/j.compeleceng.2025.110649	Impact factor 3.9
Alwakid, W. N., Dahri, N. A., Humayun, M., & Alwakid, G. N. (2025). Integrating AI chatbots for enhancing academic support in business education: A SEM-Based study toward sustainable learning. The International Journal of Management Education, 23(3), 101252. https://doi.org/10.1016/j.ijme.2025.101252	Impact factor 5.0
Khalid, Sadia, Uzair Rasheed, Uzair Khaleeq uz Zaman, Majed Alfayad, Mohammed Assiri, Wasi Haider Butt, Mamoona Humayun, and Mahmood Niazi. "Ensuring quality in software requirement engineering process: A comparative study." Egyptian Informatics Journal 31 (2025): 100754. https://doi.org/10.1016/j.eij.2025.100754	Impact factor 4.3
Naif Alwakid, G., Humayun, M., Haseeb, K. et al. Real-time e-health framework for efficient AI-driven disability monitoring using secured Internet of Medical Things. Computing 107, 163 (2025). https://doi.org/10.1007/s00607-025-01519-7	Impact factor 2.8
Almufareh, Maram Fahaad, Nz Jhanjhi, Mamoona Humayun, Ghadah Naif Alwakid, Danish Javed, and Saleh Naif Almuayqil. "Integrating Sentiment Analysis with Machine Learning for Cyberbullying Detection on Social Media." IEEE Access (2025). 10.1109/ACCESS.2025.3558843	Impact factor 3.9
Ali, Sijjad, Jia Wang, Victor Chung Ming Leung, Farhan Bashir, Uzair Aslam Bhatti, Shuaib Ahmed Wadho, and Mamoona Humayun. "CLDM-MMNNs: Cross-layer defense mechanisms through multi-modal neural networks fusion for end-to-end cybersecurity—Issues, challenges, and future directions." Information Fusion (2025): 103222. https://doi.org/10.1016/j.inffus.2025.103222	Impact Fcator 18.6
Alshudukhi, Khulud Salem, Mamoona Humayun, and Ghadah Naif Alwakid. "Integrating Edge Intelligence with Blockchain-Driven Secured IoT Healthcare Optimization Model." Computers, Materials & Continua 83.2 (2025). https://doi.org/10.32604/cmc.2025.063077	Impact factor 1.7
Al-Quayed, Fatima, Noshina Tariq, Mamoona Humayun, Farrukh Aslam Khan, Muhammad Attique Khan, and Thanaa S. Alnusairi. "Securing the Road Ahead: A Survey on Internet of Vehicles Security Powered by a Conceptual Blockchain-Based Intrusion Detection System for Smart Cities." Transactions on Emerging Telecommunications Technologies 36, no. 4 (2025): e70133. https://doi.org/10.1002/ett.70133	Impact factor 2.5
Ghadah Alwakid, Mamoona Humayun, Zulfiqar Ahmad, and Momina Shaheen. "Development of a Sustainable and Optimized Energy Ecosystem with Real-Time Monitoring through Innovative IoT-Based Actuator Design for Human-Centric Security in Smart Cities", Human-centric Computing and Information Sciences volume 15, Article number: 02 (2025) Cite this article 1 Accesses. https://doi.org/10.22967/HCIS.2025.15.002	Impact factor 3.9
Tahir, Sidra, Yaser Hafeez, Mamoona Humayun, Faizan Ahmad, Maqbool Khan, and Momina Shaheen. "Harnessing hybrid deep learning approach for personalized retrieval in e-learning." *PloS one* 19, no. 11 (2024): e0308607. https://doi.org/10.1371/journal.pone.0308607	Impact factor 2.9
G. N. Alwakid, S. Tahir, M. Humayun and W. Gouda, "Improving Alzheimer's Detection with Deep Learning and Image Processing Techniques," in *IEEE Access*, vol. 12, pp. 153445-153456, 2024, doi: 10.1109/ACCESS.2024.3481238.	Impact factor 3.4
Alsirhani, A., Tariq, N., Humayun, M. et al. Intrusion detection in smart grids using artificial intelligence-based ensemble modelling. Cluster Computing, 28, 238 (2025). https://doi.org/10.1007/s10586-024-04964-9	Impact factor 3.6
Alwakid, G., Ul Haq, F., Tariq, N. et al. Optimized machine learning framework for cardiovascular disease diagnosis: a novel ethical perspective. BMC Cardiovasc Disord 25, 123 (2025). https://doi.org/10.1186/s12872-025-04550-w	Impact factor 2.0

Al-Quayed, Fatima, Mamoona Humayun, Thanaa S. Alnusairi, Inam Ullah, Ali Kashif Bashir, and Tariq Hussain. "Context-Aware Prediction with Secure and Lightweight Cognitive Decision Model in Smart Cities." Cognitive Computation 17, no. 1 (2025): 1-12. https://doi.org/10.1007/s12559-025-10403-7	Impact factor 5.4
Robin Kumar, Dalwinder Singh,Rahul Malik, Isha Batra, Mamoona Humayun, Javed Ali Khan, "GANSCCS: Synergizing Generative Adversarial Networks and Spectral Clustering for Enhanced MRI Resolution in Cervical Spondylosis Diagnosis", in International Journal of Intelligent Systems. https://doi.org/10.1155/int/6674913	Impact factor 5.0
Fouzia Syeda, Amina Jameel, Noor Alani, Mamoona Humayun and Ghadah Naif Alwakid, "Automated Detection and Severity Prediction of Wheat Rust Using Cost-Effective Xception Architecture" in Plant, Cell & Environment https://doi.org/10.1111/pce.15413	Impact factor 6.1
P. Kumar *et al.*, "Enhanced Community Detection via Convolutional Neural Network: A Modified Approach Based on MRFasGCN Algorithm," in *IEEE Access*, vol. 12, pp. 146733-146748, 2024, doi: 10.1109/ACCESS.2024.3474303.	Impact factor 3.4
Khan, Ghulam Murtaza, Siffat Ullah Khan, Mahmood Niazi, Muhammad Ilyas, Mamoona Humayun, Akash Ahmad, Javed Ali Khan, and Sajjad Mahmood. "Complex outsourcing relationships management model." *Journal of Software: Evolution and Process* (2024): e2724. https://doi.org/10.1002/smr.2724	Impact Factor 2.1
F. Al-Quayed, D. Javed, N. Z. Jhanjhi, M. Humayun and T. S. Alnusairi, "A Hybrid Transformer-Based Model for Optimizing Fake News Detection," in *IEEE Access*, vol. 12, pp. 160822-160834, 2024, doi: 10.1109/ACCESS.2024.3476432.	Impact factor 3.4
Azka Mir, Attique Ur Rehman, Tahir Muhammad Ali , Sabeen Javaid, , Maram Fahaad Almufareh, Mamoona Humayun, Momina Shaheen, "A Novel Approach for the Effective Prediction of Cardiovascular Disease using Applied Artificial Intelligence Techniques" Accepted for Publicaton in ESC Heart Failure https://onlinelibrary.wiley.com/doi/10.1002/ehf2.14942	Impact Factor 3.2
Attique Ur Rehman, Wasi Haider, Tahir Muhammad Ali, , Sabeen Javaid, Maram Fahaad Almufareh, Mamoona Humayun, Hameedur Rahman,Azka Mir, Momina Shaheen, " A Machine Learning-Based Framework for Accurate and Early Diagnosis of Liver Diseases: A Comprehensive Study on Feature Selection, Data Imbalance, and Algorithmic Performance" Accepted for publication in International Journal of Intelligent Systems https://onlinelibrary.wiley.com/doi/10.1155/2024/6111312	Impact Factor 5
G. Alwakid, M. Humayun and W. Gouda, "A Comparative Investigation of Transfer Learning Frameworks Using OCT Pictures for Retinal Disorder Identification," in *IEEE Access*, doi: 10.1109/ACCESS.2024.3455750	Impact factor 3.4
Marya Iqbal, Yaser Hafeez, Nabil Almashfi, Amjad Alsirhani, Faeiz Alserhani, Sadia Ali, Mamoona Humayun, Muhammad Jamal, "Enhancing Secure Development in Globally Distributed Software Product Lines: A Machine Learning-Powered Framework for Cyber-Resilient Ecosystems" Computers, Materials & Continua 2024, 79(3), 5031-5049, 2024. https://doi.org/10.32604/cmc.2024.051371	Impact Factor 2
M. Fahaad Alumfareh, M. Humayun, Z. Ahmad and A. Khan, "An Intelligent LoRaWAN-Based IoT Device for Monitoring and Control Solutions in Smart Farming Through Anomaly Detection Integrated With Unsupervised Machine Learning," in *IEEE Access*, vol. 12, pp. 119072-119086, 2024, doi: 10.1109/ACCESS.2024.3450587	Impact factor 3.4
K. S. Alshudukhi, F. Ashfaq, N. Jhanjhi and M. Humayun, "Blockchain-Enabled Federated Learning for Longitudinal Emergency Care," in *IEEE Access*, doi: 10.1109/ACCESS.2024.3449550	Impact factor 3.4
Irum Ilays, Yaser Hafeez, Nabil Almashfi, Sadia Ali, Mamoona Humayun, Muhammad Aqib, Ghadah Alwakid; Towards Improving the Quality of Requirement and Testing Process in Agile Software Development: An Empirical Study, Computers, Materials & Continua 2024. https://doi.org/10.32604/cmc.2024.053830	Impact Factor 2

Almufareh MF, Tariq N, Humayun M, Khan FA. Melanoma identification and classification model based on fine-tuned convolutional neural network. DIGITAL HEALTH. 2024;10. doi:10.1177/20552076241253757	Impact Factor 2.9
Fatima Al-Quayed, Zulfiqar Ahmad, Mamoona Humayun*, "A situation based predictive approach for cybersecurity intrusion detection and prevention using machine learning and deep learning algorithms in wireless sensor networks of industry 4", IEEE Access, 34800 – 34819, 2024. DOI: 10.1109/ACCESS.2024.3372187	Impact Factor 3.4
Tariq, N., Alsirhani, A., Humayun, M. et al. A fog-edge-enabled intrusion detection system for smart grids. J Cloud Comp 13, 43 (2024). https://doi.org/10.1186/s13677-024-00609-9	Impact Factor 3.7
Sahu, Madhusmita, Rasmita Dash, Sambit Kumar Mishra, Mamoona Humayun, Majed Alfayad, and Mohammed Assiri. "A deep transfer learning model for green environment security analysis in smart city", Journal of King Saud University-Computer and Information Sciences 36, no. 1 (2024): 101921. https://doi.org/10.1016/j.jksuci.2024.101921	Impact Factor 5.2
Humayun, Mamoona, Amjad Alsirhani, Faeiz Alserhani, Momina Shaheen, and Ghadah Alwakid. "Transformative synergy: SSEHCET—bridging mobile edge computing and AI for enhanced eHealth security and efficiency." Journal of Cloud Computing 13, no. 1 (2024): 1-21 https://doi.org/10.1186/s13677-024-00602-2	Impact Factor 3.7
Humayun, Mamoona, Noshina Tariq, Majed Alfayad, Muhammad Zakwan, Ghadah Alwakid, and Mohammed Assiri. "Securing the Internet of Things in Artificial Intelligence Era: A Comprehensive Survey." IEEE Access (2024). DOI: 10.1109/ACCESS.2024.3365634	Impact Factor 3.4
Almufareh, Maram Fahaad, Muhammad Imran, Abdullah Khan, Mamoona Humayun, and Muhammad Asim. "Automated Brain Tumor Segmentation and Classification in MRI using YOLO-based Deep Learning." IEEE Access (2024). DOI: 10.1109/ACCESS.2024.3359418	Impact Factor 3.4
Almufareh, Maram Fahaad, Noshina Tariq, Mamoona Humayun, and Bushra Almas. "A Federated Learning Approach to Breast Cancer Prediction in a Collaborative Learning Framework." In Healthcare, vol. 11, no. 24, p. 3185. MDPI, 2023. https://doi.org/10.3390/healthcare11243185	Impact Factor 2.4
Almufareh, Maram Fahaad, Sumaira Kausar, Mamoona Humayun, and Samabia Tehsin. "Leveraging Motor Imagery Rehabilitation for Individuals with Disabilities: A Review." In Healthcare, vol. 11, no. 19, p. 2653. MDPI, 2023. https://doi.org/10.3390/healthcare11192653	Impact Factor 2.4
Almufareh, Maram Fahaad, Samabia Tehsin, Mamoona Humayun, and Sumaira Kausar. "Artificial Cognition for Detection of Mental Disability: A Vision Transformer Approach for Alzheimer's Disease." In Healthcare, vol. 11, no. 20, p. 2763. MDPI, 2023. https://doi.org/10.3390/healthcare11202763	Impact Factor 2.4
Iqbal, A., Khan, S.U., Niazi, M., Humayun, M., Sama, N.U., Khan, A.A. and Ahmad, A., 2023. Advancing database security: a comprehensive systematic mapping study of potential challenges. Wireless Networks, pp.1-28. https://doi.org/10.1007/s11276-023-03436-z	Impact Factor 2.1
Aldughayfiq, Bader, Farzeen Ashfaq, N. Z. Jhanjhi, and Mamoona Humayun. "YOLOv5-FPN: A Robust Framework for Multi-Sized Cell Counting in Fluorescence Images." Diagnostics 13, no. 13 (2023): 2280. https://doi.org/10.3390/diagnostics13132280	Impact Factor 3
Alwakid, Ghadah, Walaa Gouda, Mamoona Humayun, and N. Z. Jhanjhi. "Enhancing diabetic retinopathy classification using deep learning." Digital Health 9 (2023): 20552076231203676. https://doi.org/10.1177/20552076231203676	Impact Factor 2.9
Aldughayfiq, B., Ashfaq, F., Jhanjhi, N.Z. and Humayun, M., 2023. A Deep Learning Approach for Atrial Fibrillation Classification Using Multi-Feature Time Series Data from ECG and PPG. Diagnostics, 13(14), p.2442. https://doi.org/10.3390/diagnostics13142442	Impact Factor 3
Aldughayfiq, Bader, Farzeen Ashfaq, N. Z. Jhanjhi, and Mamoona Humayun. "Capturing Semantic Relationships in Electronic Health Records Using Knowledge Graphs: An Implementation Using MIMIC III Dataset and GraphDB." In Healthcare, vol. 11, no. 12, p. 1762. MDPI, 2023. https://doi.org/10.3390/healthcare11121762	Impact Factor 2.4

Hassan, Muhammad, Noshina Tariq, Amjad Alsirhani, Abdullah Alomari, Farrukh Aslam Khan, Mohammed Mujib Alshahrani, Muhammad Ashraf, and Mamoona Humayun. "GITM: A GINI Index-Based Trust Mechanism To Mitigate And Isolate Sybil Attack In RPL-Enabled Smart Grid Advanced Metering Infrastructures." IEEE Access (2023). DOI: 10.1109/ACCESS.2023.3286536	Impact Factor 3.4
Aldughayfiq, Bader, Farzeen Ashfaq, N. Z. Jhanjhi, and Mamoona Humayun. "Explainable AI for Retinoblastoma Diagnosis: Interpreting Deep Learning Models with LIME and SHAP." Diagnostics 13, no. 11 (2023): 1932. https://doi.org/10.3390/diagnostics13111932	Impact Factor 3
Al-Quayed, Fatima, Mamoona Humayun, and Sidra Tahir. "Towards a Secure Technology-Driven Architecture for Smart Health Insurance Systems: An Empirical Study." In Healthcare, vol. 11, no. 16, p. 2257. MDPI, 2023. https://doi.org/10.3390/healthcare11162257	Impact Factor 2.4
Alwakid, Ghadah, Walaa Gouda, Mamoona Humayun, and Noor Zaman Jhanjhi. "Deep learning-enhanced diabetic retinopathy image classification." Digital Health 9 (2023): 20552076231194942. https://doi.org/10.1177/20552076231194942	Impact Factor 2.9
Aldughayfiq, B., Ashfaq, F., Jhanjhi, N.Z. and Humayun, M., 2023. A Deep Learning Approach for Atrial Fibrillation Classification Using Multi-Feature Time Series Data from ECG and PPG. Diagnostics, 13(14), p.2442. https://doi.org/10.3390/diagnostics13142442	Impact Factor 3
Alwakid, G., Gouda, W. and Humayun, M., 2023. Enhancement of Diabetic Retinopathy Prognostication Using Deep Learning, CLAHE, and ESRGAN. Diagnostics, 13(14), p.2375. https://doi.org/10.3390/diagnostics13142375	Impact Factor 3
Humayun, Mamoona, Maram Fahaad Almufareh, Fatima Al-Quayed, Sulaiman Abdullah Alateyah, and Mohammed Alatiyyah. "Improving Healthcare Facilities in Remote Areas Using Cutting-Edge Technologies." Applied Sciences 13, no. 11 (2023): 6479. https://doi.org/10.3390/app13116479	Impact Factor 2.8
Alwakid, G., Gouda, W., Humayun, M. and Jhanjhi, N.Z., 2023. Diagnosing Melanomas in Dermoscopy Images Using Deep Learning. Diagnostics, 13(10), p.1815. https://doi.org/10.3390/diagnostics13101815	Impact Factor 3
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Soobia Saeed, NZ Jhanjhi, Mehmood Naqvi, and Mamoona Humayun, "Analysis of Software Development Methodologies". International Journal of Computing and Digital Systems, Vol.8, Issue 5 (2019), pp. 445-460.	Scopus

Research & Development :(**V. Conference Papers**)

Butt, Rawish, Noshina Tariq, Mamoona Humayun, and Ammara Ishaq. "Malware Detection in Network Traffic Data for Internet of Things." In 2024 26th International Multi-Topic Conference (INMIC), pp. 1-6. IEEE, 2024.	Scopus IEEE
Tariq, Noshina, Mamoona Humayun, Ghadah Naif Alwakid, Bushra Almas, N. Z. Jhanjhi, and Muhammad Zakwan. "A lightweight Federated Learning-based Intrusion detection model for Internet of Things." In 2024 26th International Multi-Topic Conference (INMIC), pp. 1-6. IEEE, 2024.	Scopus IEEE
Alwakid, Ghadah Naif, Najm Us Sama, Mamoona Humayun, N. Z. Jhanjhi, and Bilal Hassan. "E2A Translate: An English to Arabic Rule-Based Translation Framework." In 2024 26th International Multi-Topic Conference (INMIC), pp. 1-6. IEEE, 2024.	Scopus IEEE
Saira Shafi, Noshina Tariq, Muhammad Ashraf, Ghadah Alwakid, **Mamoona Humayun** and Momina Shaheen, "Cyber Defense in Energy: Federated Learning Solution for Malicious Intrusions in Smart Grids", 6th International Conference on Data Analytics & Management (ICDAM-2025), 13-14 June 2024.	Scopus Springer
Shouq Hamoud Alanazi, **Mamoona Humayun**, Amjad Alsirhani, Momina Shaheen, "Strengthening E-mail Security: NLP and Deep Learning-Powered Phishing Detection System" 6th International Conference on Data Analytics & Management (ICDAM-2025), 13-14 June 2024.	Scopus Springer
Jamil, Muhammad, Umer Farooq, Noshina Tariq, Ghadah Alwakid, Mamoona Humayun, and Nadia Khan. "Enhancing Data Aggregation in Cluster-Based Wireless Sensor Networks with LCSS: Longest Common Subsequence Empowerment." In International conference on WorldS4, pp. 41-52. Singapore: Springer Nature Singapore, 2024.	Scopus Springer
Noshina Tariq, Rabia Khan, Maram Fahaad Almufareh, **Mamoona Humayun**, Momina Shaheen, "A Federated Learning Mechanism for Mitigating Selective Forwarding Attacks in RPL-based Internet of Things" IEEE International Conference on Communications, 9–13 June 2024 // Denver, CO, USA, Scaling the Peaks of Global Communication	Scopus IEEE
Sama, Najm Us, N. Z. Jhanjhi, **Mamoona Humayun**, and Atiq Ur Rahman. "Digital twin evolution, application areas and enabling technology." In AIP Conference Proceedings, vol. 2729, no. 1. AIP Publishing, 2024.	ISI
Ebtihal Nazzal Al-Omrani, **Mamoona Humayun**, "Securing electronic health records (EHR) from tampering using Blockchain", 30th International Conference on Systems Engineering, August 22-24 2023, Las Vegas NV, USA	Scopus IEEE
Faisal Fayyaz Kiyani, Bushra Hamid, **Mamoona Humayun**, Mohammed Assiri and NZ. Jhanjhi, "Ranking of Web Search for Best Link Identification by using Hierarchy of Web Page Content," 30th International Conference on Systems Engineering, August 22-24 2023, Las Vegas NV, USA.	Scopus IEEE
Rameen Jafar, Maram Fahaad Almufareh, Sundas Ashraf, Bushra Khan, Wasi Haider Butt, **Mamoona Humayun**, "Towards Modeling Functional Requirements from Tacit Knowledge", The 21st International Conference on Scientific Computing (CSC'23: July 24-27, 2023; Las Vegas, USA).	Scopus IEEE
Aqsa Munir, Mohammed Assiri, Saba Naveed Alam, Muzna Khan, Wasi Haider Butt, **Mamoona Humayun**, "A Systematic Review of Approaches for Reviewing Security-Related Aspects in Agile Requirements Specification of Web Applications", The 21st International Conference on Scientific Computing (CSC'23: July 24-27, 2023; Las Vegas, USA).	Scopus Springer
Umer Farooq, Noshina Tariq, Danish Mehmood, Maram Fahaad Almufareh, **Mamoona Humayun** and Farrukh Aslam Khan, "GAPTCHA: A Game-Based Image-CAPTCHA". International Conference on Computing & Emerging Technologies (ICCET), Lahore, Pakistan, 2023	Scopus Springer
Muhammad Waqas, Muhammad Zakwan, Muhammad Ashraf, Ghadah Naif Alwakid **and Mamoona Humayun**, "A survey on approximate hardware accelerator for error-tolerant applications". International Conference on Computing & Emerging Technologies (ICCET), Lahore, Pakistan, 2023	Scopus Springer

Humaira Ashraf, Javeria Malik, Uswa Ihsan, Fatima Al-Quayed, **Mamoona Humayun** and Dr. Noor Zaman, "An Efficient Stegnographic Approach for Securing Text Transmission Using S-Box in Cloud" The International Conference on Business Analytics for Technology and Security (ICBATS), Dubai, UAE, 2023.	Scopus IEEE
Haider Ali Khan, Samabia Tehsin, **Mamoona Humayun** and Ghadah Naif Alwakid, "Detection of Facial Forgery in Digital Images". The International Conference on Business Analytics for Technology and Security (ICBATS), Dubai, UAE, 2023.	Scopus IEEE
Humaira Ashraf, Javeria Malik, Uswa Ihsan, Fatima Al-Quayed, **Mamoona Humayun** and Nz Jhanjhi," A Secure and Reliable Supply chain management approach integrated with IoT and Blockchain", The International Conference on Business Analytics for Technology and Security (ICBATS), Dubai, UAE, 2023.	Scopus IEEE
Humaira Ashraf, Fizza Khan Khan, Uswa Ihsan, Fatima Al-Quayed, Nz Jhanjhi and **Mamoona Humayun**, "MABPD: Mobile Agent-Based Prevention and Black Hole Attack Detection in Wireless Sensor Networks" The International Conference on Business Analytics for Technology and Security (ICBATS), Dubai, UAE, 2023.	Scopus IEEE
Sarwar, Sumaira, Sidra Tahir, **Mamoona Humayun**, Maram Fahhad Almufareh, N. Z. Jhanjhi, and Bushra Hamid. "Recommendation of Smart Devices Using Collaborative Filter Approach." In 2022 14th International Conference on Mathematics, Actuarial Science, Computer Science and Statistics (MACS), pp. 1-4. IEEE, 2022.	Scopus IEEE
Zaheer, A., Tahir, S., **Mamoona Humayun**., Almufareh, M.F. and Jhanjhi, N.Z., 2022, November. A novel Machine learning technique for fake smart watches advertisement detection. In 2022 14th International Conference on Mathematics, Actuarial Science, Computer Science and Statistics (MACS) (pp. 1-5). IEEE.	Scopus IEEE
Hussain, Ibrar, Sidra Tahir, **Mamoona Humayun**, Maram Fahhad Almufareh, N. Z. Jhanjhi, and Farkhanda Qamar. "Health Monitoring System Using Internet of Things (IoT) Sensing for Elderly People." In 2022 14th International Conference on Mathematics, Actuarial Science, Computer Science and Statistics (MACS), pp. 1-5. IEEE, 2022.	Scopus IEEE
Mamoona Humayun, NZ Jhanjhi, , M N Talib, , Mudassar Hussain Shah, G. Suseendran., Cyber Security for data science: Issues, opportunities, and challenges. 2nd international conference on technology innovation and data sciences-2021. Springer	Scopus Springer
Muhammad Ibrahim Khalil, , **Mamoona Humayun**, NZ Jhanjhi, M N Talib, Thamer A. Tabbakh., Multi-Class Segmentation of Organ at Risk from Abdominal CT Images: A Deep Learning Approach. 2nd international conference on technology innovation and data sciences-2021. Springer	Scopus Springer
Sowjanya Ramisetty , Divya Anand, , Kavita, Sahil Verma, NZ Jhanjhi, **Mamoona Humayun**., Energy Efficient Model for Recovery from Multiple Cluster nodes failure using Moth flame optimization in Wireless Sensor Networks. 2nd international conference on technology innovation and data sciences-2021. Springer	Scopus Springer
Fatima-Tuz- Zahra, Dr. Noor Zaman, Sarfraz Nawaz Brohi, Nazir A. Malik and **Mamoona Humayun**, "Proposing a Hybrid RPL Protocol for Rank and Wormhole Attack Mitigation using Machine Learning" IEEE 2020 International Conference on Computer and Information Sciences (ICCIS), Al Jouf, Saudi Arabia, 2020.	Scopus IEEE
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Ikra Chesti, **Mamoona Humayun**, Najm Us Sama and NZ Jhanjhi. "Evolution, Mitigation and Prevention of Ransomware. IEEE 2020 International Conference on Computer and Information Sciences (ICCIS), Al Jouf, Saudi Arabia, 2020.	Scopus IEEE
B, Hamid, NZ. Jhanjhi, **M. Humayun**, and A. Khan, " Cyber Security Issues and Challenges for Smart Cities: A survey," IEEE 13th International Conference on Mathematics, Actuarial Science, Computer Science and Statistics (MACS), Karachi, Pakistan, Dec 2019, (SCOPUS-Indexed)	Scopus IEEE
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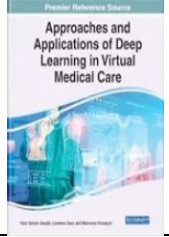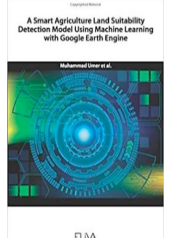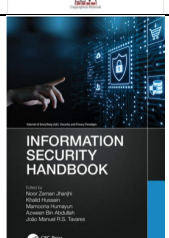|	
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S. S. A. Bukhari, M**. Humayun**, NZ. Jhanjhi, and S. A. A. Shah, "Test Case Generation Using Unified Modeling Language," IEEE 2019 International Conference on Computer and Information Sciences (ICCIS), Al Jouf, Saudi Arabia, 2019, (SCOPUS-Indexed).	Scopus IEEE
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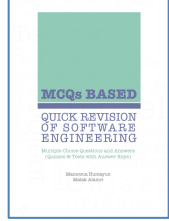## Research & Development :(**VI. Book Chapters**)

Sindiramutty, Siva Raja, Noor Zaman Jhanjhi, and Mamoona Humayun. "Game-Based Learning Platforms for Cybersecurity Certifications." In Gamification Learning Framework for Cybersecurity Education, pp. 125-160. IGI Global Scientific Publishing, 2026.	IGI USA
Sindiramutty, Siva Raja, Bashir Riskhan, and Mamoona Humayun. "Adaptive Gamification Strategies for Different Learning Styles in Cybersecurity." In Gamification Learning Framework for Cybersecurity Education, pp. 277-316. IGI Global Scientific Publishing, 2026.	IGI USA
Ashraf, Humaira, N. Z. Jhanjhi, Uswa Ihsan, Navid Ali Khan, and Mamoona Humayun. "Prediction of Health Indicators Based on Exercise, Sleep, and Water Intake: Data-Based Machine Learning Approach." In *AI Techniques for Securing Medical and Business Practices*, pp. 291-310. IGI Global, 2025.	IGI USA
Khan, Azeem, Noor Jhanjhi, Ghassan Ahmed Ali Abdulhabeb, Sayan Kumar Ray, Mustansar Ali Ghazanfar, and Mamoona Humayun. "Securing IoT Devices Using Generative AI Techniques." In *Reshaping CyberSecurity With Generative AI Techniques*, pp. 219-264. IGI Global, 2025.	IGI USA
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Rehman, Tayyab, Noshina Tariq, Muhammad Ashraf, and Mamoona Humayun. "Network Intrusion Detection to Mitigate Jamming and Spoofing Attacks Using Federated Leading: A Comprehensive Survey." Cybersecurity Measures for Logistics Industry Framework (2024): 92-115.	IGI USA
Sama, Najm Us, Kartinah Zen, N. Z. Jhanjhi, and Mamoona Humayun. "Computational Intelligence Ethical Issues in Health Care." In Computational Intelligence in Healthcare Informatics, pp. 349-362. Singapore: Springer Nature Singapore, 2024.	Springer
Khan, N., Hamid, B., Humayun, M., Jhanjhi, N.Z. and Tahir, S., 2024. Information Retrieval from Healthcare Information System. In Computational Intelligence in Healthcare Informatics (pp. 107-125). Singapore: Springer Nature Singapore.	Springer
Rawish Butt, Tayyab Rehman, Noshina Tariq, Muhammad Ashraf, Mamoona Humayun, "Security of Unmanned Aerial Vehicles" in Cyber security issues and challenges in Drone Industry, IGI global book, 2024.	IGI USA
Shah, Imdad Ali, N. Z. Jhanjhi, Mamoona Humayun, and Uttam Ghosh. "Impact of COVID-19 on Higher and Post-secondary Education Systems." In How COVID-19 is accelerating the Digital Revolution, pp. 71-83. Springer, Cham, 2022.	Springer
Shah, I.A., Jhanjhi, N.Z., Humayun, M. and Ghosh, U., 2022. Health Care Digital Revolution during COVID-19. In How COVID-19 is accelerating the Digital Revolution (pp. 17-30). Springer, Cham.	Springer
Azeem Khan, Noor Zaman Jhanjhi, Mamoona Humayun, "The Role of Cybersecurity in Smart Cities" in Cyber Security Applications for Industry 4.0, Chapman and Hall/CRC, IST edition, 2022	CRC Taylor &Francis
Saira Muzafar, Mamoona Humayun and Syed Jawad Hussain, "Emerging Cybersecurity Threats in the Eye of E-Governance in the Current Era" in Cybersecurity Measures for E-Government Frameworks, IGI Global, 2022.	IGI USA

Manzoor Hussain, Mir Sajjad Hussain Talpur and Mamoona Humayun, "The Consequences of Integrity Attacks on E-Governance: Privacy and Security Violation," " in Cybersecurity Measures for E-Government Frameworks, IGI Global, 2022.	IGI USA
Soobia Saeed, Noor Zaman Jhanjhi, Mehmood Naqvi, Mamoona Humyun, Muneer Ahmad. "Optimized Breast Cancer Premature Detection Method With Computational Segmentation: A Systematic Review Mapping" in Approaches and applications of deep learning in virtual medical care	IGI USA
Shahida, Khalid Hussain Usmani, Mamoona Humayun, "Security Management System (SMS)" Information Security: Handbook ", with CRC Press Taylor and Francis Group	CRC Taylor &Francis
Khalil, Muhammad Ibrahim, Mamoona Humayun, and N. Z. Jhanjhi. "COVID-19 Impact on Educational System Globally." Emerging Technologies for Battling Covid-19: Applications and Innovations: 257.	
Saeed, Soobia, N. Z. Jhanjhi, Mehmood Naqvi, Shakeel Ahmed, Mamoona Humayun, and Vasaki Ponnusamy. "A Case Study of Investigation of Crime Management System Using ICT." In ICT Solutions for Improving Smart Communities in Asia, pp. 243-263. IGI Global, 2021.	IGI USA
Saeed, Soobia, N. Z. Jhanjhi, Syed Mehmood Naqvi, Mamoona Humayun, and Vasaki Ponnusamy. "Women Empowerment: Case Studies of Successful Women Fulfillment for ICT and Technology." In ICT Solutions for Improving Smart Communities in Asia, pp. 264-276. IGI Global, 2021.	IGI USA
Qamar, Farkhanda, N. Z. Jhanjhi, Bushra Hamid, and Mamoona Humayun. "Women Empowerment Employing ICT In Pakistan." In ICT Solutions for Improving Smart Communities in Asia, pp. 316-335. IGI Global, 2021.	IGI USA
Hamid, Bushra, N. Z. Jhanjhi, Mamoona Humayun, Farkhanda Qamar, and Vasaki Ponnusamy. "Telemedicine for Healthier Community Development in Pakistan." In ICT Solutions for Improving Smart Communities in Asia, pp. 295-315. IGI Global, 2021.	IGI USA
Saeed, Soobia, N. Z. Jhanjhi, Memood Naqvi, Mamoona Humayun, and Vasaki Ponnusamy. "Quantitative Analysis of COVID-19 Patients: A Preliminary Statistical Result of Deep Learning Artificial Intelligence Framework." In ICT Solutions for Improving Smart Communities in Asia, pp. 218-242. IGI Global, 2021.	IGI USA
Bilal, Muhammad Yasir, Rana Muhammad Amir Latif, N. Z. Jhanjhi, and Mamoona Humayun. "The Impact of the ICT in the Analysis of Visual Attention Using Facial Expressions of the Students." In ICT Solutions for Improving Smart Communities in Asia, pp. 185-199. IGI Global, 2021.	IGI USA
Mamoona Humayun, Noor Zaman, Malak Alamri & Azeem Khan. "Smart Cities and Digital Governance" In Employing Recent Technologies for Improved Digital Governance by IGI Global Publishers USA, Inc.	IGI USA
Soobia Saeed, Afnizanfaizal Abdullah, NZ Jhanjhi, Memood Naqvi, Mamoona Humayun., Statistical Analysis of pre- Surgery and Post-Surgery of Health Care Sector Using High Dimension Segmentation, in Machine Learning for Healthcare, (2021) CRC Press New York, https://doi.org/10.1201/9780429330	CRC Taylor &Francis
Saeed, Soobia, N. Z. Jhanjhi, Mehmood Naqvi, and Mamona Humayun. "The Influence of Communal Networks on the Growth of Free Enterprise: A Case Study by Pioneers of the Social Network in Karachi." In ICT Solutions for Improving Smart Communities in Asia, pp. 277-294. IGI Global, 2021.	IGI USA
Bushra Hamid, Noor Zaman & Mamoona Humayun., "Digital Governance for Developing Countries Opportunities, Issues and Challenges in Pakistan" In Employing Recent Technologies for Improved Digital Governance by IGI Global Publishers USA, Inc.	IGI USA
Azeem Khan , Noor Zaman, Mamoona Humayun & Muneer Ahmad., "The role of IoT in Digital Governance" In Employing Recent Technologies for Improved Digital Governance by IGI Global Publishers USA, Inc.	IGI USA
Vasaki, Noor Zaman & Mamoona Humayun., "Public Private Partnership for cyber security, framework" In Employing Recent Technologies for Improved Digital Governance by IGI Global Publishers USA, Inc.	IGI USA
Malak Alamri, Noor Zaman & Mamoona Humayun., "Digital Curriculum Importance for New Era Education" In Employing Recent Technologies for Improved Digital Governance by IGI Global Publishers USA, Inc.	IGI USA

Soobia Saeed, N. Z. Jhanjhi, Mehmood Naqvi, Vasaki Ponnusamy, Mamoona Humayun., "Analysis of Climate Prediction and Climate Change in Pakistan Using Data Mining Techniques" in "Industrial Internet of Things and Cyber-Physical Systems: Transforming the Conventional to Digital" by IGI Global Publishers USA	IGI USA
Soobia Saeed, N. Z. Jhanjhi, Mehmood Naqvi, Mamoona Humayun, Vasaki Ponnusamy. "Analyzing the Performance and Efficiency of IT-Compliant Audit Module Using Clustering Methods" in "Industrial Internet of Things and Cyber-Physical Systems: Transforming the Conventional to Digital" by IGI Global Publishers USA	IGI USA
Soobia Saeed, Afnizanfaizal Abdullah, NZ Jhanjhi, Memood Naqvi, Mamoona Humayun., "Performance Analysis of Machine Learning Algorithm for Health Care Tools with High Dimension Segmentation" , in Machine Learning for Healthcare, (2021) CRC Press New York, https://doi.org/10.1201/9780429330131	CRC Taylor &Francis

Research & Development (VII: books Published & In Progress)

Noor Zaman, **Mamoona Humayun**, Faizan Ahmad and Momina Shaheen; "Federated Learning for the Metaverse" by Elsevier (In progress, 2024-2025)	
Noor Zaman , Loveleen Gaur, **Mamoona Humayun,** "Approaches and Applications of Deep Learning in Virtual Medical Care" IGI Global, USA, 2022. https://www.igi-global.com/book/approaches-applications-deep-learning-virtual/274538 ISBN13: 9781799889298 | ISBN10: 1799889297 | EISBN13: 9781799889304	
Muhammad Umer, Rana M. Amir Latif, Muhammad Farhan, Noor Zaman Jhanjhi, **Mamoona Humayun**, Syed Jawad Hussain. "A Smart Agriculture Land Suitability Detection Model Using Machine Learning with Google Earth Engine" By Eliva Press, 2020, ISBN:1636480128, 9781636480121 https://www.amazon.com/dp/1636480128 https://www.elivapress.com/en/book/book-6184722213/	
Noor Zaman, Khalid Hussain, **Mamoona Humayun**, Azween Abdullah, João Manuel R.S. Tavares, "Information Security: Handbook ", with CRC Press Taylor and Francis Group, 2022, ISBN 9780367365721 https://www.routledge.com/Information-Security-Handbook/Jhanjhi-Hussain-Humayun-Abdullah-Tavares/p/book/9780367365721 ISBN 9780367365721	
Noor Zaman, **Mamoona Humayun**, Vasaki Ponnusamy, G.Suseendran, "Artificial Intelligence for Cyber Security: An IoT Perspective", with Wxrivener Publishing Wiley (2025) EAN/UPC 9781119762263 https://www.amazon.co.uk/Artificial-Intelligence-Cyber-Security-Perspective/dp/111976226X Publisher : Wiley-Scrivener; 1st edition (28 May 2023) ISBN-10 : 111976226X ISBN-13 : 978-1119762263	

Rana M. Amir Latif, Muhammad Farhan, Khalid Hussain, Noor Zaman Jhanjhi, **Mamoona Humayun**, "A smart assessment methodology to measure and analyze google play store", Eliva Press SRL, Chisinau, Moldova, Europe, 2020, ISBN 1952751691 https://www.amazon.com/dp/1952751691 https://www.elivapress.com/en/book/book-4005241574/	
Mamoona Humayun & Malak Z Alamri. "A Quick revision of software Engineering" , Jouf University, KSA	

Project/Thesis Supervisions/Co-Supervision

- Supervising 6 Master of web application development students, completed 8 BS projects.
- Supervised three **Masters of Cyber Security** students of Jouf university, Al-Jouf KSA with the following thesis titles
    a. Securing electronic health records (EHR) from tampering using Blockchain
    b. Data Duplication Removal for Improving Security and Performance
    c. Securing Cloud Data using Cryptographic Algorithms
- Two PhD student from PMAS-Arid Agriculture University **Rawalpind**i, **Pakistan** has successfully completed their degree with the following thesis titles
    a. Resource Management through brokering in intercloud federation
    b. Mining Software Repositories Using Advanced Data Mining Techniques
- Supervised 13 **Master of Software Engineering** students at PMAS-Arid Agriculture University **Rawalpind**i, **Pakistan with the following thesis titles**
    a. Requirement change management for distributed software environment using ontology
    b. Risk management for small and medium size organization
    c. A model to facilitate quality assurance Teams in GSD projects
    d. A systematic literature approach for web application security vulnerabilities detection
    e. Improving requirements traceability for GSD projects
    f. An empirical study on improving shared understanding of requirements in Global software Development
    g. Improving requirement change management process in service oriented software engineering
    h. Towards service oriented requirement engineering using ontology
    i. Generating optimized test case from Unified Modeling Language
    j. Incorporating software security in agile software development
    k. Knowledge management in service oriented architecture
- Supervised various projects of BSIT and BS Computer Science at PMAS-Arid Agriculture University **Rawalpind**i, **Pakistan**
- Supervised various projects of BSIT and BS Computer Science at **Jouf University**, **Saudi Arabia**.

Professional Certification

- **Recognition for New Academics (R4NA)**
  Completed a one-year program designed to foster critical reflection, self-assessment, and pedagogical development in higher education, including inclusive teaching, assessment practices, and the use of technology

in learning.
Awarded: 2025

- **Member, BCS – The Chartered Institute for IT**
  Achieved membership in 2024, recognized as a qualified professional in IT, gaining access to resources, professional development, and networking opportunities.

- **Equality, Diversity, and Inclusion (Score: 90%)**
  Completed on 16/07/2024. Focused on understanding and promoting diversity and inclusion in professional environments.

- **Working with the PREVENT Duty (Score: 90%)**
  Completed on 16/07/2024. Developed an understanding of preventing radicalization and promoting safer communities.

- **Challenging Unconscious Bias (Score: 100%)**
  Completed on 21/07/2024. Focused on identifying and addressing unconscious biases to promote fair and inclusive practices.

- **Display Screen Equipment (DSE) and Self-Assessment**
  Completed on 21/07/2024. Enhanced knowledge of safe practices for working with display screens.

- **Fire Safety (Score: 80%)**
  Completed on 21/07/2024. Learned fire safety measures and protocols in the workplace.

- **GDPR - Data Protection (Score: 100%)**
  Completed on 22/07/2024. Focused on data protection regulations and practices in line with GDPR standards.

- **Health and Safety Induction (Score: 80%)**
  Completed on 21/07/2024. Gained knowledge of health and safety procedures in the workplace.

- **Information Security Essentials (Score: 100%)**
  Completed on 21/07/2024. Covered essential information security protocols to protect organizational data.

- **Manual Handling (Score: 100%)**
  Completed on 21/07/2024. Covered safe handling techniques to reduce physical strain and injuries in the workplace.

- **Reporting Health and Safety and Incidents (Score: 99%)**
  Completed on 21/07/2024. Focused on reporting and documenting health and safety incidents accurately.

- **Principles of Risk Assessment (Score: 100%)**
  Completed on 21/07/2024. Gained knowledge of identifying, assessing, and mitigating workplace risks.

- **Safeguarding Essentials (Score: 100%)**
  Completed on 22/07/2024. Focused on safeguarding individuals and ensuring safety in professional environments.

Professional Services: (A. Guest Editor/Scientific Committee member)

1. Keynote Speaker for 3rd International Conference of Sciences "Revamped Scientific Outlook of 21st Century, 2024".
2. Keynote Speaker at International workshop on Applications of artificial Intelligence in Agriculture December 13-14 , 2023.
3. Invited speaker at 1st International workshop on Applications of AI & IoT, October 2022.
4. PC Member of Secure Software'23: 3rd International Workshop on Secure Software: Challenges, Opportunities and Lessons Learned
5. Technical Committee member of 20th International Conference on Frontiers of Information Technology (FIT'23)
6. Scientific committee chair for SecConf 2019 Conference
7. Member of British Computer Society

8. Member of technical committee for FIT 2019 Conference
9. Member of scientific technical committee for INMIC 2019 conference
10. And more…..…

Professional Services: (B. Conference /Journal Paper Reviewer)

1. Academic Editor of PLOS one Journal
2. Reviewer of IEEE ICCIS Conference Jouf University, KSA
3. Reviewer of Arabian Journal for Science and Engineering
4. Reviewer of IEEE ACCESS
5. Reviewer of Journal of Software: Evolution and Process
6. Reviewer of IET Information Security
7. Reviewer of Software: Practice and Experience
8. Reviewer of Asian Journal of Research in Computer Science
9. Reviewer of Proceedings of the Pakistan Academy of Sciences
10. Reviewer of various MDPI journals
11. And more…..…
12. 180 peer review records exist in my WoS profile

Technical Talks and Workshops Conducted

1. Seminar on "Moderating Factors for software security and performance (2023)" in Jouf University KSA
2. Workshop on "Cyber security challenges for IoT" in Jouf University KSA (2022)
3. Workshop on "How to write a Master thesis proposal?" in Jouf University KSA(2021)
4. Conducted a Seminar on "Role if IoT in Cyber security" in Jouf University KSA (2020)
5. Workshop "UML in project development life cycle" in Jouf University KSA (2019)
6. Conducted a Seminar on "Role if IoT in Cyber security" in Jouf University KSA (2019)
7. Conducted a workshop on "A Short guide for successful final year project" in Jouf University KSA (2018)
8. Conducted Training on unified modeling language in Jouf University KSA (2018)
9. Key Speaker in the workshop on World Computer Security day held in Jouf University KSA (2018)
10. Conducted a workshop on "programming for beginners" in Jouf University KSA (2017)

Courses Taught

1. Software Security
2. Computer Programming 1
3. Computer Programming 2
4. Modern Application development
5. Software Engineering I
6. Software Engineering II
7. Secure Software Development
8. C++
9. Database
10. Programming Fundamental
11. Advanced Database
12. Operating System
13. Requirement Engineering

14. Software Analysis and Design
15. Software Project Management
16. Software Quality Assurance
17. Advance Database
18. Mobile Computing
19. Web application development
20. Semi Structure Data
21. Internet Technologies
22. Software Design Patterns
23. Data mining
24. Big data
25. And many more……

Personal Information

Date of Birth	Nov 29, 1982
Nationality	Pakistani
Marital Status	Married having 3 children
Language Proficiency	Urdu and English (Fluent in spoken and written),
	Arabic & Chinese (Medium Level)
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