

Umar Islam



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Objective

As a dedicated professional with 6 years of teaching experience in higher education and 4 years of research, I possess a strong background in leveraging machine learning and deep learning techniques to solve complex problems. With a major in computer science and multiple publications in peer-reviewed journals, my work spans diverse domains, including artificial intelligence, cybersecurity, bioinformatics, and financial analysis. I am seeking a challenging researcher or lecturer position where I can apply my expertise in data-driven solutions, mentor teams, and contribute to innovative projects that address real-world challenges. My commitment to advancing technology and practical applications makes me a valuable asset for data-centric roles in academia or industry.

Experience

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|---|-------------------------|
| Lecturer in Computer Science, The University of Veterinary & Animal Science, Swat, Pak | August 2025 to Present |
| <ul style="list-style-type: none">• Head of Department additional responsibilities.• Supervising the final year undergraduate students along with placement students.• Working with designing undergraduate program curriculum. | |
| Lecturer in Computer Science, IQRA National University, Swat Campus, Pak | Feb 2022 to August 2025 |
| <ul style="list-style-type: none">• Preparing and delivering lecturers.• Supervising the final year undergraduate students along with placement students.• Working as an undergraduate program coordinator. | |
| Lecturer in Computer Science, The University of Agriculture, KPK, Pak | Oct 2019 to Jan 2022 |
| <ul style="list-style-type: none">• Worked as a visiting faculty.• Preparing and delivering lecturers. | |
| Lecturer in Computer Science, The Brains Institute, KPK, Pak | March 2020 to Oct 2020 |
| <ul style="list-style-type: none">• Preparing and delivering lecturers.• Supervising the final year undergraduate students along with placement students.• Working as an undergraduate program coordinator. | |
| Lecturer in Computer Science, Post Graduate College, Timergara, KPK, Pak | April 2018 to Sep 2019 |
| <ul style="list-style-type: none">• Preparing and delivering lecturers.• Supervising the final year undergraduate students. | |



Education

PhD in Computer Science – University of Malakand, KPK, Pakistan	2022 in progress
MS in Computer Science – COMSATS University, Islamabad, Pakistan	March 2015 to March 2018
BS in Computer Science (Hons) – University of Peshawar, KPK, Pakistan	Oct 2010 to Jan 2015

Awards

- PM Reimbursement Scholarship for Master Degree – COMSATS University, Islamabad, Abbottabad Campus.
- PM Laptop Award – COMSATS University, Islamabad, Abbottabad Campus.

Skills

- Operating system: Advanced knowledge and use of Windows and LINUX.
- Python, C++, Adobe Photoshop, Adobe Illustrator, Coral Draw, Adobe In Design, Graphics and Animation: Adobe Photoshop, MS Visio

Workshops and Training

- Digital Information Literacy, the State of University New York.
- CNSS (Certified Network Security Specialist), From ICSI (International Cyber security Institute).
- NSE 1 Network Security Associate, FORTINET NSE Institute.
- NSE 2 Network Security Expert Certification, FORTINET NSE Institute.
- Course Completion on "The Threat Landscape", From FORTINET NSE Institute.
- Training on "Level 3 leadership", IQRA National University, Peshawar.
- Training on "The Evolving Role of Teachers as Quality Professionals", IQRA National University, Swat Campus. Pakistan

Reviewer Roles

- Scientific Reports (Journal)
- Cluster Computing (Journal)
- Discover Applied Sciences (Journal)
- Frontiers in Energy (Journal)

Publications

1. Umar Islam et al. "Federated Security Framework: A Heterogeneous Federated Learning Architecture for Privacy-Preserving Intrusion Detection in IoT Networks", *Transactions on Emerging Telecommunications Technologies*, 2026.



2. Umar Islam et al. "FedDrive-Sec: A Blockchain-Assisted Federated Deep Reinforcement Learning Framework for Secure and Adaptive Internet of Vehicles", *Telematics and Informatics Reports*, 2026.
3. M Ahmad, AA Abdulkadhem, Umar Islam "Optimizing Large Language Models in Distributed Environments: A Holistic Approach to Efficiency, Ethics, and Governance ", *International Journal of Computational Intelligence Systems*, 2025.
4. Umar Islam et al. "Adaptive Federated Learning Framework for Privacy Preserving Consumer-Centric IoMT: A Novel Secure Data Collaboration Model", *IEEE Transactions on Consumer Electronics*. 2025.
5. Umar Islam et al. "Fetal-Net: enhancing Maternal-Fetal ultrasound interpretation through Multi-Scale convolutional neural networks and Transformers", *Scientific Reports*, 2025.
6. Wasim Ahmad, Umar Islam et al. "Enhancing reliable and energy-efficient UAV communications with RIS and deep reinforcement learning", *PeerJ Computer Science*, 2025.
7. R Almanasir, D Al-solomon, Umar Islam "Classification of threats and countermeasures of cloud computing", *Journal of Cyber Security and Risk Auditing*, 2025.
8. Umar Islam et al. "A Hybrid Fog-Edge Computing Architecture for Real-Time Health Monitoring in IoMT Systems with Optimized Latency and Threat Resilience", *Scientific Reports*, 2025.
9. Umar Islam et al. "Enhancing Physical Security in IIoMT Environment", *Internet of Things*, 2025.
10. Umar Islam et al. "AI-Enhanced Intrusion Detection in Smart Renewable Energy Grids: A Novel Industry 4.0 Cyber Threat Management Approach", *International Journal of Critical Infrastructure Protection*, 2025.
11. Almanasir, Rasha, Deyaa Al-solomon, Saif Indrawes, Mohammed Almaiah, Umar Islam, and Marwan Alshar'e. "Classification of threats and countermeasures of cloud computing", *Journal of Cyber Security and Risk Auditing*, 2025.
12. Umar Islam et al. "Hyperdynamic Adaptive Learning Fusion (HALF) model for superior predictive analytics in E-learning", *Neural Computing and Applications*, 2025.
13. MA Almaiah, RB Sulaiman, Umar Islam "Federated Learning in Healthcare: A Bibliometric Analysis of Privacy, Security, and Adversarial Threats (2021-2024)", *SHIFRA*, 2025.
14. A Ali, Umar Islam "Federated Learning for Smart and Sustainable Forest Fire Detection in Green Internet of Things", *ESTIDAMAA*, 2025.
15. Umar Islam et al. "An Ontological Approach to Investigate the Impact of Deep Convolutional Neural Networks in Anomaly Detection of Left Ventricular Hypertrophy Using Echocardiography Images", *Image and Vision Computing*, 2025.
16. Umar Islam et al. "Enhancing Blockchain Security Against Data Tampering: Leveraging Hybrid Model in Multimedia Forensics and Multi-Party Computation for Supply Chain Data Protection", *IEEE Access*, 2024.
17. Umar Islam et al. "Empowering Global Ethereum Price Prediction With Ethervoyant: A State-Of-The-Art Time Series Forecasting Model", *Neural Computing and Applications*, 2024.
18. Umar Islam et al. "Sentinelfusion Based Machine Learning Comprehensive Approach for Enhanced Computer Forensics", *PeerJ Computer Science*, 2024.
19. Umar Islam et al. "NeuroHealth Guardian: A Novel Hybrid Approach for Precision Brain Stroke Prediction and Healthcare Analytics", *Journal of Neuroscience Methods*, 2024.
20. Umar Islam et al. "Detection of Renal Cell Hydronephrosis in Ultrasound Kidney Images: A Study on the Efficacy of Deep



Convolutional Neural Networks", *Peerj Computer Science*, 2024.

21. Umar Islam et al. **"Enhancing Economic Stability with Innovative Crude Oil Price Prediction and Policy Uncertainty Mitigation in USD Energy Stock Markets"**, *Fluctuation and Noise Letters*, 2024.
22. Umar Islam et al. **"Real-Time Detection Schemes for Memory DoS (M-DoS) Attacks on Cloud Computing Applications"**, *IEEE Access*, 2023.
23. Umar Islam et al. **"Investigating the Effectiveness of Novel Support Vector Neural Network for Anomaly Detection in Digital Forensics Data"**, *Sensors*, 2023.
24. Umar Islam et al. **"A Novel Anomaly Detection System on the Internet of Railways Using Extended Neural Networks"**, *Electronics*, 2022.
25. Umar Islam et al. **"Detection of Distributed Denial of Service (DDoS) Attacks in IOT-based Monitoring System of Banking Sector Using Machine Learning Models"**, *Sustainability*, 2022.
26. Rahim, Asif, Yanru Zhong, Tariq Ahmad, and Umar Islam, **"An Intelligent Approach for Preserving the Privacy and Security of a Smart Home Based on IoT Using LogitBoost Techniques"**, *Journal of Hunan University Natural Sciences*, 2022.
27. Hameed, Mazhar, Fengbao Yang, Muhammad Imran Ghafoor, Fawwad Hassan Jaskani, **Umar Islam**, Muhammad Fayaz, and Gulzar Mehmood. **"IOTA-based Mobile Crowd Sensing: Detection of Fake Sensing Using Logit-Boosted Machine Learning Algorithms"**, *Wireless Communications and Mobile Computing*, 2022.
28. Arif, Muhammad, Anwar Ullah, Sadam Al-Azani, Valentina Emilia Balas, Oana Geman, Muhammad Jalal Khan, and **Umar Islam**. **"Comparative Analysis of Various Image Splicing Algorithms"**, In *International Workshop Soft Computing Applications*, pp. 211-228. Springer, Cham, 2018.