Anwar Shah

Assistant Professor
Cyberarians Research Lab

Assistant Professor
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Education

2018 – 2022 **PhD, Computer Science**, *FAST-NUCES*, Islamabad.
Three-way Clustering Approaches for Open World Classification and Overlapping Regions

2016 – 2018 **Master of Computer Science (MS) (Distinction)**, *Abasyn University*, Peshawar.
Hybrid Denoising and Resizing Algorithm for Grayscale Aerial Images

2005 – 2007 **Master in Business Administration (MBA (HR))**, *University of Peshawar*, Peshawar.
The main focus of the internship and the written thesis is to explore the different human resource practices and their effect on the overall performance of MCB bank Nowshera.

2003 – 2006 **Master in Computer Science (MSc)**, *University of Peshawar*, Peshawar.
Medical Store Inventory System using ORACLE 6i. Designed for "The Medicose", Peshawar Saddar, in collaboration with U&U Software House Peshawar.

2001 – 2003 **Bachelor in Computer Science (BSc)**, *University of Peshawar*, Peshawar.

Work Experience

10-08-2022 – Present **Assistant Professor**, *FAST-NUCES*, Chiniot - Faisalabad, Pakistan.
Contributing directly to degree programmes through research-led teaching.
- Supervising undergraduate and postgraduate students.
- Curriculum development.
- Subjects Taught: Programming Fundamentals, OOP in C++, Data Structure in C++, Programming for AI, Data Science Tools & Techniques, Natural Language Processing, Applied Recommender Systems, Information Security, Blockchain, Cloud Computing, Deep Neural Networks.

01-10-2024 – 30-09-2025 **Research Fellow (Remote)**, *Gachon University*, Seongnam-daero, Sujeong-gu, Seongnam-si, Gyeonggi-do,, Republic of Korea.
The work is part of the project funded by the Ministry of Science and ICT (MSIT), Korea, under the Information Technology Research Center (ITRc) support program (Project Code: RS-2024-00259004), overseen by the Institute for Information & Communications Technology Planning & Evaluation (IITP).

01-08-2018 – 30-04-2022 **Research Fellow**, *FAST - National University of Computer and Emerging Sciences*, Peshawar, Pakistan.
Project: Three-way Decision-based Approaches for Open World Classification.
- Carrying out research in the predefined areas.
- Disseminating results through scientific publications.
- Participating in research proposal drafting and project deliverables.

08-12-2008 – 30-08-2015 **Team Lead & IT Trainer**, *e-Soft Technologies*, Dubai, UAE.
- Train, manage, assess, and motivate teams to accomplish projects with desired results.
- Develop and deliver training programs for IT staff, including creating instructional materials.
- Train professionals on new and emerging technologies to ensure they remain current and competitive.
- Oversee project management tasks, including planning, coordination, and tracking progress.
- Evaluate team performance and project outcomes, providing feedback and implementing improvements.
- Act as a liaison between team members and management, addressing conflicts and ensuring effective communication.

08-12-2007 – 30-08-2008 **Lecturer in Computer Science**, *IM Studies*, University of Peshawar, Pakistan.
- Delivered undergraduate and postgraduate teaching in Computer Science / MIS for BBA and MBA cohorts.
- Taught business-focused computing topics (e.g., MIS fundamentals, databases, spreadsheets/analytics, basic programming concepts, networking/IT infrastructure, cybersecurity awareness).
- Conducted lab sessions and practical demonstrations (Excel, database tools, web/MIS case exercises).
- Participated in faculty meetings, curriculum review activities, and academic committees.

Publications

Journal Articles

2025 Herman Zahid, Adil Zulfiqar, Muhammad Adnan, Muhammad Sajid Iqbal, **Shah, Anwar**, and Salah Eldeen Gasim Mohamed. Global renewable energy transition: A multidisciplinary analysis of emerging computing technologies, socio-economic impacts, and policy imperatives. ***Results in Engineering***, page 105258. Elsevier, 2025, **(Impact Factor:7.9)**.

2025 Herman Zahid, Adil Zulfiqar, Muhammad Adnan, Muhammad Sajid Iqbal, **Shah, Anwar**, Usman Abbasi, and Salah Eldeen Gasim Mohamed. Transforming nano grids to smart grid 3.0: Ai, digital twins, blockchain, and the metaverse revolutionizing the energy ecosystem. ***Results in Engineering***, page 105850. Elsevier, 2025, **(Impact Factor:7.6)**.

2025 Saba Waseem, Muhammad Adnan, Muhammad Sajid Iqbal, Arslan Ahmed Amin, **Shah, Anwar**, and Muhammad Tariq. From classical to intelligent control: Evolving trends in robotic manipulator technology. ***Computers and Electrical Engineering***, volume 127, page 110559. Elsevier, 2025, **(Impact Factor:4.9)**.

2025 Fazal Wahab, Shengjun Ma, Yuhai Zhao, and Anwar Shah. An explainable three-way neural network approach for intrusion detection in iot ecosystem. ***Internet of Things***, page 101722. Elsevier, 2025, **(Impact Factor:7.6)**.

2025 Fazal Wahab, Shengjun Ma, Xuze Liu, Yuhai Zhao, Anwar Shah, and Bahar Ali. A ranked filter-based three-way clustering strategy for intrusion detection in highly secure iot networks. ***Computers and Electrical Engineering***, volume 127, page 110514. Elsevier, 2025, **(Impact Factor:4.9)**.

2025 Adil Ahmad, **Shah, Anwar**, Waleed S Alnumay S Alnumay, and Bahar Ali. Graphguard: An adaptive approach for restoring accuracy in backdoor-compromised gnns. ***Neural Networks***, 2025, **(Impact Factor:6.3)**.

2025 Adil Ahmad, **Shah, Anwar**, Bahar Ali, and Qamar Uz Zaman. Pattern matters: A deep learning approach with attention mechanism for text abstraction in low-ranked languages. ***Multimedia Tools and Applications***, pages 1–27. Springer, 2025.

2025 Adil Ahmad, **Anwar Shah**, Waleed S. Alnumay, Muhammad Adnan, Sajid Anwer, and Qamar Uz Zaman. A comprehensive survey on the convergence of blockchain, digital twins, and metaverse: Shaping the future of cybersecurity frameworks. ***Computers and Electrical Engineering***, volume 126. Elsevier, 2025, **(Impact Factor:4.9)**.

2025 Muhammad Adnan, Muhammad Sajid Iqbal, Sadia Jabeen Siddiqi, Ijaz Ahmed, **Shah, Anwar**, Inam Ullah, and Muhammad Tariq. Modeling the future: Mathematical insights for smart grid 3.0. ***Computers and Electrical Engineering***, volume 123, page 110283. Elsevier, 2025, **(Impact Factor:4.9)**.

2024 Fazal Wahab, **Shah, Anwar**, Imran Khan, Bahar Ali, and Muhammad Adnan. An sdn-based hybrid-dl-driven cognitive intrusion detection system for iot ecosystem. ***Computers and Electrical Engineering***, volume 119, page 109545. Elsevier, 2024, **(Impact Factor:4.9)**.

2024 **Shah, Anwar**, Bahar Ali, Fazal Wahab, Inam Ullah, Fayez Alqahtani, and Amr Tolba. A three-way clustering mechanism to handle overlapping regions. ***IEEE Access***. IEEE, 2024, **(Impact Factor:3.6)**.

2024 Muhammad Shoaib, Tamleek Ali Tanveer, Bahar Ali, Bashir Hayat, and **Shah, Anwar**. Grid neighbourhood based three way clustering (3wc). ***Information Sciences***, volume 659, page 120082. Elsevier, 2024, **(Impact Factor:6.8)**.

2023 **Shah, Anwar**, Bahar Ali, Fazal Wahab, Inam Ullah, Kassian TT Amesho, and Muhammad Shafiq. Entropy-based grid approach for handling outliers: a case study to environmental monitoring data. ***Environmental Science and Pollution Research***, volume 30, pages 125138–125157. Springer, 2023.

2023 **Shah, Anwar**, Bahar Ali, Masood Habib, Jaroslav Frnda, Inam Ullah, and Muhammad Shahid Anwar. An ensemble face recognition mechanism based on three-way decisions. ***Journal of King Saud University-Computer and Information Sciences***, volume 35, pages 196–208. Elsevier, 2023, **(Impact Factor:6.1)**.

2022 Fazal Wahab, Inam Ullah, **Shah, Anwar**, Rehan Ali Khan, Ahyoung Choi, and Muhammad Shahid Anwar. Design and implementation of real-time object detection system based on single-shoot detector and opencv. *Frontiers in Psychology*, volume 13, page 1039645. **Frontiers Media SA**, 2022, **(Impact Factor:2.9)**.

2022 **Shah, Anwar**, Javed Iqbal Bangash, Abdul Waheed Khan, Imran Ahmed, Abdullah Khan, Asfandyar Khan, and Arshad Khan. Comparative analysis of median filter and its variants for removal of impulse noise from gray scale images. ***Journal of King Saud University-Computer and Information Sciences***, volume 34, pages 505–519. Elsevier, 2022, **(Impact Factor:6.1)**.

2022 **Shah, Anwar**, Nouman Azam, Eisa Alanazi, and JingTao Yao. Image blurring and sharpening inspired three-way clustering approach. ***Applied Intelligence***, volume 52, pages 18131–18155. Springer, 2022, **(Impact Factor:3.5)**.

2021 **Shah, Anwar**, Nouman Azam, Bahar Ali, Muhammad Taimoor Khan, and JingTao Yao. A three-way clustering approach for novelty detection. ***Information Sciences***, volume 569, pages 650–668. Elsevier, 2021, **(Impact Factor:6.8)**.

2021 Bahar Ali, Nouman Azam, **Shah, Anwar**, and JingTao Yao. A spatial filtering inspired three-way clustering approach with application to outlier detection. ***International Journal of Approximate Reasoning***, volume 130, pages 1–21. Elsevier, 2021, **(Impact Factor:3.0)**.

Book Chapters

2023 Fazal Wahab, **Shah, Anwar**, Inam Ullah, D Adhikari, and Inam Khan. Application of artificial intelligence in smart distributed processing and data mining. *Artificial Intelligence for Intelligent Systems Fundamentals, Challenges, and Applications Ed 1st*. CRC Press, Taylor & Francis, 2023.

2023 Fazal Wahab, **Shah, Anwar**, Hayat Ullah, Inam andKhan, D Adhikari, and M Khan, A. The significance of artificial intelligence in cyber security. *Artificial Intelligence for Intelligent Systems Fundamentals, Challenges, and Applications Ed 1st*. CRC Press, Taylor & Francis, 2023.

Submitted Articles

2025 Waleed Alnumay Muhamamd Adnan Khan **Anwar Shah**, Adil Ahmad and Chau Yuen. Neural networks under siege: A survey on backdoor attacks across key domains. ***ACM Surveys***. ACM, 2025.

2025 **Anwar Shah**, Fazal Wahab, Sajid Anwer, and Muhammad Adnan. An interpretable transformer-based blockchain-enabled federated learning framework for intrusion detection in iomt networks. ***Internet of Things***. Elsevier, 2025.

2025 **Anwar Shah**, Fazal Wahab, Muhammad Adnan, Muhammad Tariq, Hong Song, and Chau Yeun. A cyber-resilient game-theoretic framework for control-aware neural modeling in iomt systems. ***IEEE Transactions on Consumer Electronics***. IEEE, 2025.

2025 **Anwar Shah**, Fazal Wahab, and Muhammad Adnan. Cea^{2}t: A chaotic evolutionary ai framework for robust anti-jamming in iot and wireless sensor networks. ***Cluster Computing***. Elsevier, 2025.

2025 **Anwar Shah** Waleed Alnumay Obaid Ur Rehman, Naeem Khan and Omar Khan. Robust classification using quantum fourier convolutional neural networks. ***IEEE Access***. IEEE, 2025.

2025 **Anwar Shah** Obaid Ur Rehman, Naeem Khan, Bahar Ali, Waleed Alnumay, and Omar Khan. Advancing image classification with quantum fourier transform convolutional networks. ***IEEE Access***. IEEE, 2025.

2025 Faisal Cheema **Anwar Shah** Waleed S. Alnumay Hafiz Tayyeb Javed, Kifayat Ullah Khan and Bahar Ali. Optimizing computational efficiency and retrieval time through pruning of overlapping regions in knowledge graphs. ***Knowledge-based Systems***. Elsevier, 2025.

2025 **Anwar Shah** Waleed Alnumay Bahar Ali, Naeem Khan and Muhamamd Adnan Khan. A fusion-driven approach of attention-based cnn-bilstm for protein family classification - profamnet. ***IEEE Access***. Elsevier, 2025.

2025 Bahar Ali and **Anwar Shah**. An interpretable robust three-way clustering approach to forein elements detection. ***Pattern Recognition***. Elsevier, 2025.

2025 Saad Alahmari, Yousef Alhaizaey, Saad Nasser AlTamimi, Jawhara Aljabri, and **Anwar Shah**. Litegen: An explainable lightweight transformer-guided generative ensemble network for imbalanced intrusion detection in iot environments. ***Computer Communication***. Elsevier, 2025.

2025 Adil Ahmad, **Anwar Shah**, Muhamamd Adnan Khan Waleed Alnumay, and Chau Yuen. Towards secure ai: Detection and mitigation of backdoor attacks. ***International Journal of Computational Intelligence Systems***. Springer, 2025.

2025 Adil Ahmad, **Anwar Shah**, Fazal Wahab, Muhammad Adnan, and Chau Yuen. Seqfusionnet: A sequence fusion deep learning network for protein function prediction. ***Digital health***. SAGE, 2025.

2025 Adil Ahmad, **Anwar Shah**, Usman Ghous Ghada Attei, Taliha Akram, and Muhamamd Adnan Khan. Convergence of metaverse, blockchain, and edge computing: A new paradigm architecture for transforming smart grid to smart grid 3.0. ***Computer and Electrical Engineering***. Springer, 2025.

2025 Adil Ahmad, **Anwar Shah**, Asim Suleman Abdullah Alwabel, and Saad Alahmri. Backdoor attacks on neural networks: A comprehensive survey on detection and mitigation strategies. ***Information Processing Managment***. Elsevier, 2025.

2025 Adil Ahmad, **Anwar Shah**, Waleed S. Alnumay, Muhammad Adnan, and Chau Yuen. Gnn-dtbd: Gnn-driven dynamic threshold backdoor detection. ***Neural Networks***. Elsevier, 2025.

2025 Waqar Afridi, **Anwar Shah**, Qamar Uz Zaman, and and Sajid Anwer Asim Suleman Abdullah Alwabel, Laila Almutairi. Tristrcat: Advanced persistent threat detection via .text analysis. ***Supercomputing***. Springer, 2025.

2025 Waqar Afridi, **Anwar Shah**, Qamar Uz Zaman, and and Sajid Anwer Asim Suleman Abdullah Alwabel, Laila Almutairi. A survey on testops methodologies, automation frameworks, and case studies. ***Journal of computationaland applied mathematics***. Springer, 2025.

2025 Waqar Afridi, **Anwar Shah**, Qamar Uz Zaman, and and Sajid Anwer Asim Suleman Abdullah Alwabel, Laila Almutairi. Aptcodex: A framework for advanced persistent threat attribution through .text analysis. ***IEEE Access***. IEEE, 2025.

Research Projects

Deanship of Research, Prince Sattam bin Abdulaziz University, alkharj, KSA

August 2025 – July 2026 **Privacy-Preserving Traffic Prediction Using Multi-Agent Systems and Game Theory Enhanced by Zero-Knowledge Proofs in IoV Networks**.

The research aims to design a privacy-preserving traffic prediction model using Multi-Agent Systems, Game Theory, and Zero-Knowledge Proofs, optimizing traffic flow and platoon formation for autonomous vehicles. It will evaluate the system's privacy, security, and computational efficiency in decentralized IoV environments, comparing it with traditional models.

Position **Consultant/ Supervisor**

Deanship of Research, Prince Sattam bin Abdulaziz University, alkharj, KSA

April 2025 – March 2026 **Optimization Model based on Multi-Agent Systems for Adaptive Real-time Task Allocation Leveraging Quantum-inspired Algorithms**.

This project creates an optimization model for adaptive real-time task allocation using multi-agent systems and quantum-inspired algorithms, enhancing decision-making efficiency, and scalability, offering improved performance in complex, time-sensitive environments.

Position **Consultant/ Supervisor**

Faculty Research Support Grant (FRSG), National University of Computer and Emerging Sciences

March 2025 – Feb 2026 ***An Intelligent and Adaptive Cyber Resilience Framework: Moving from Reactive to Proactive (IIoT in Smart Cities)***.

This research presents an intelligent and adaptive cyber resilience framework for Industrial Internet of Things (IIoT) in smart cities, advancing from reactive to proactive security strategies. It focuses on enhancing resilience by dynamically adapting to emerging threats, ensuring robust protection for critical infrastructure in real-time.

Position **Investigator/ Supervisor**

Faculty Research Support Grant (FRSG), National University of Computer and Emerging Sciences

March 2025 – Feb 2026 ***Quantum-Resilient, Self-Healing Cybersecurity Framework for Smart Cities Integrating IoT, Blockchain, and Digital Twins***.

This research proposes a quantum-resilient, self-healing cybersecurity framework for smart cities, integrating IoT, blockchain, and digital twins. The framework aims to enhance security and resilience by enabling autonomous recovery and protection against emerging quantum threats.

Position **Investigator/ Supervisor**

Faculty Research Support Grant (FRSG), National University of Computer and Emerging Sciences

March 2025 – Feb 2026 ***TriStrCat: A Three-Way Decision Inspired XAI and LLM-Based Framework for APT Detection***.

This research introduces TriStrCat, a three-way decision-inspired XAI and LLM-based framework for advanced persistent threat (APT) detection. The framework leverages explainable AI and large language models to enhance threat detection accuracy and interpretability in cybersecurity.

Position **Investigator/ Supervisor**

Faculty Research Support Grant (FRSG), National University of Computer and Emerging Sciences

March 2025 – Feb 2026 ***Inspired by Boolean Networks and Large Language Models: A Multi-Modal Data Integration Approach for Early Detection and Prognosis in Breast Cancer***.

This research presents a multi-modal data integration approach for early detection and prognosis in breast cancer, inspired by Boolean networks and large language models. The approach combines computational models and data analysis techniques to improve predictive accuracy and clinical insights.

Position **Investigator/ Supervisor**

Faculty Research Support Grant (FRSG), National University of Computer and Emerging Sciences

Jan 2025 – Dec 2025 ***An Explainable Privacy-enhancing model based on three-way decisions and differential privacy for Internet of Things***.

This research proposes an explainable privacy-enhancing model for the Internet of Things, combining three-way decisions and differential privacy techniques. The model aims to safeguard user privacy while ensuring transparency and interpretability in IoT systems.

Position **Investigator/ Supervisor**

Faculty Research Support Grant (FRSG), National University of Computer and Emerging Sciences

Jan 2025 – Dec 2025 ***Enhancing Esophageal Cancer Subtype Classification with Attention-Based Deep Learning on Gene Expression Data***.

This project develops an attention-based deep learning model to improve esophageal cancer subtype classification (ESCC and EAC) using gene expression data, addressing diagnostic limitations through advanced feature selection and transformer architectures.

Position **Investigator/ Supervisor**

Faculty Research Support Grant (FRSG), National University of Computer and Emerging Sciences

May 2024 – April 2025 ***Quality Improvement through TestOps Process Improvement using scalable test automation***.

The main goal of this project is to enhance the quality and efficiency of software development processes. This is achieved through the integration of TestOps methodologies and scalable test automation techniques, which are designed to streamline testing processes, reduce manual efforts, and increase test coverage throughout the software development lifecycle.

Position **Investigator/ Supervisor**

Faculty Research Support Grant (FRSG), National University of Computer and Emerging Sciences

March 2024 – Feb 2025 ***Smart Contract Optimization based on Generative AI***.

This research explores smart contract optimization using generative AI, aiming to enhance contract efficiency, security, and automation through advanced AI-driven techniques.

Position **Investigator/ Supervisor**

Faculty Research Support Grant (FRSG), National University of Computer and Emerging Sciences

Sep 2023 – Oct 2024 ***Investigating Backdoor Attacks on Neural Networks Using Graph Neural Networks***.

This research investigates backdoor attacks on neural networks through the application of graph neural networks, aiming to identify and mitigate vulnerabilities in model security.

Position **Investigator/ Supervisor**

Faculty Research Support Grant (FRSG), National University of Computer and Emerging Sciences

May 2021 – April 2022 ***Investigating Three-way Clustering Approaches for Open World Classification***.

This research explores three-way clustering approaches for open-world classification, aiming to improve the identification and handling of unknown or evolving class distributions in dynamic environments.

Position **Research Assistant**

MS Thesis Supervision

2026 – 2027 ***Muzaffar Shabeer*** Three way inspired Reinforcement Learning Approach for False Injection Detection in IIOT

2025 – 2026 ***Rohan Farooq*** Quantum Game Theoretic based Reinforcement Learning Approach for NextGen Cyber Attacks in IoVs

2025 – 2026 ***Riyan Attar*** A Laypanouv-Stability Incorporated Reinforcement Learning Approach with BFT for Cyber Resilience in IoVs

2025 – 2026 ***Fatima Khalid*** Optimizing Cyber Resilience in IoVs Using Cooperative Game Theory incorporated Reinforcement Learning

2025 – 2026 ***Sehar Nazeer*** Optimized Chain of Thoughts Inspired Reinforcement Learning for NextGen in IoT Ecosystems

2025 – 2026 ***M. Sayem Ijaz*** Cyber Resilient GPS System in Autonomous Vehicles: Context-Aware GAN for Mitigating Spoofing Attack

2023 – 2024 ***Shaheer Bin Saeed*** Improving Task Allocation Process in Software Development

Development Projects Supervision

2025 – 2026 ***DualHeadGNN (R&D)*** Detecting FDAI in IIoTs

2025 – 2026 ***GBN (R&D)*** GAN based NextGen Cyber Defense for IoVs

2025 – 2026 ***DTFH (R&D)*** A light Weight Model for Cyber Resilience in IoMT

2025 – 2026 ***NeuroHire*** AN AI Platform for automating the Hiring Process

2025 – 2026 ***YaaP*** A LLM based Mobile App for communicating in different Languages

2025 – 2026 ***SmartAds*** A LLM based platform for creating smart Ads

2025 – 2026 ***RA*** A LLM based platform for compiling and writing Literature

2025 – 2026 ***SolRush*** Solana Based DEX

2024 – 2025 ***SafeBirth*** A LLM based platform for educating pregnant mothers

2024 – 2025 ***DevOpsMentor*** A ML/LLM based training platform for DevOps

2024 – 2025 ***Capital Valley*** A ML/LLM based platform with blockchain for start-up/investors meet

2024 – 2025 ***IELTSMastery*** A ML/LLM based platform for IELTS reading, writing, listning and speaking

2024 – 2025 ***Elysium*** An advanced AI-Powered data cleaning suite

2023 – 2024 ***D-HubXone*** A blockhcain based platform for

2023 – 2024 ***HealthUnity*** A blockchain based platform to manage and maintain a secure medical system

2023 – 2024 ***Virtualingua*** A generative AI based learning platform for learning English

2023 – 2024 ***ScholarNet*** A AI inspired platform for academic learning

2023 – 2024 ***CultureConnect*** A platform to facilitate and connect people

2023 – 2024 ***CertiAI*** An AI based platform for international certification exams preparation

2023 – 2024 ***ScopeAI*** A genrative AI based platform to give suggestions for optimizations of smart contract

Societies

2024-Till , Mentor: FAST Society of Cybersecurity.
(*Personal Web-page*)

2023-2025 , Co-Mentor: Microsoft Learn Student Ambassadors (MLSA) – Society.
(*Personal Web-page*)

Administrative Roles in University

2024-Till , Convener: Program Team for BSAI.

2022-Till , Advisor: MSDS.

2023-Till , Member: Exam Committee.

2023-Till , Member: Campus Disciplinary Committee.

Sessions/Talks Delivered

2025 Blockchain: Research and Development Perspectives

2024 AWS Cloud

2024 Python Practices in Cybersecurity

2024 Blockchain

Kali Linux

Wireshark/NMap/Metasploit/BurpSuite

Ethereum/Solana/Hyperledger Fabric

Trainings & Certifications

2007 **Cisco Certified Network Professional (CCNP)**.
2006 **Cisco Certified Network Associate (CCNA)**.
2006 **Microsoft Certified System Engineer on Messaging (MCSE on Messaging)**.
2006 **Microsoft Certified System Administrator on Messaging (MCSA)**.
2006 **Microsoft Certified Professional (MCP)**.

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2020 **AWS Cloud (Training)**.
2016 **CEH (Training)**.
2010 **Kali Linux(Training)**.
2006 **Red Hat Certified Engineer (RHCE) (Training)**.

Academic Achievements & Recognitions

2024 **Member of International Rough Set Society (IRSS)**
2024 **Associate Editor: IECE Transactions on Emerging Trends in Network Systems**
2024 **Reviewer: IEEE Transactions on Computational Social Systems**
2024 **Reviewer: IEEE Journal of Biomedical and Health Informatics**
2024 **Reviewer: International Journal of Cryptocurrency Research**
2024 **Reviewer: Information Sciences**
2024 **Reviewer: Pattern Recognition**
2024 **Reviewer: Applied Energy**
2024 **Reviewer: Neurocomputing**
2024 **Reviewer: Cleaner and Circular Bioeconomy**
2024 **Reviewer: Journal of Advances in Information Technology**
2024 **Reviewer: Scientific Reports**
2023 **Reviewer: PloS One**
2024 **Reviewer: MDPI Informatics**
2024 **Reviewer: CMC-Computers, Materials & Continua**
2024 **Reviewer: Computers and Electrical Engineering**
2022 **Reviewer: Conference AAAI**
2022 **Reviewer: Conference ICIT (Nu-CFD)**
2022 **Reviewer: Conference ICET (GiKi)**

2025 **2nd Runner Up Team Mentor, ICC Idea Cup, Air University, Islamabad**
2018 **Distinction in MS**
2012 **Best Project Award, DEC Dubai**

Referees

Dr. Nouman Azam
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Department of Computer Science
FAST - NUCES
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School of Computing and Data Science
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Assistant Professor
Department of Computer Science
HULL University
United Kingdom
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Dr. Sajid Anwar
Assistant Professor
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Prince Sattam Bin Abdulaziz University
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IMSciences Peshawar
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