



Dr. Hussain Shah

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ABOUT ME

Computer Science **PhD researcher** and lecturer with over 8 years of university-level teaching experience (2018–Present) specializing in artificial intelligence, deep learning, **IoT security**, and cloud computing security. An active researcher with a proven publication record across high-impact venues—including **IEEE Access**—focusing on generative **AI**, **retrieval-augmented generation (RAG)**, **agentic AI security**, and **cloud-integrated threat detection**. Demonstrated success in designing advanced **intrusion detection architectures**, directing DGSIT-funded **assistive technology initiatives**, and supervising innovative **AI capstone projects**.

EDUCATION & TRAINING

PhD in Computer Science

Islamia College, Peshawar [02/09/2019 - 01/04/2026]

City: Peshawar | **Country:** Pakistan

Level in EQF: 8 | **Thesis:** Securing the Internet of Things: A Deep Learning-Based Intrusion Detection Approach

MS in Computer Science

The University of Agriculture, Peshawar [01/09/2015 - 04/09/2017]

City: Peshawar | **Country:** Pakistan

Final grade: Gold Medalist | **Level in EQF:** 7 | **Thesis:** During my MS program, I completed my thesis in the area of computer networks

Bachelor of Education (B.Ed.)

Abdul Wali Khan University, Mardan [01/09/2014 - 01/09/2015]

City: Mardan | **Country:** Pakistan

Level in EQF: 5

Master of Computer Science

Abdul Wali Khan University, Mardan [01/09/2011 - 02/09/2013]

City: Mardan | **Country:** Pakistan

Level in EQF: 6

WORK EXPERIENCE

Shaikh Zayed Islamic Centre, University of Peshawar | - Pakistan, Peshawar

Computer science lecturer

[01/02/2018 - Current]

- Teach core CS courses, including Network Security, Cloud Communication, Data Structures, Algorithms, Software Engineering, and Automata.
- Supervise BS capstone projects in Generative AI, Deep Learning, Computer Vision, and Smart Device Security.

- Lead curriculum updates, course coordination, and student mentoring.

Shaikh Zayed Islamic Centre, University of Peshawar - Pakistan, Peshawar

Education programme coordinator

[01/09/2020 - Current]

- Coordinator at Computer Science Department (Bachelor's program): Managed program administration, academic planning, and curriculum evaluation

PROJECTS

Assistive AI Systems | Supervised a Directorate General of Science & IT (DGSIT)-sponsored project developing AI-powered smart vision glasses for visually impaired individuals.

Deep Learning for Agriculture Directed research on deep learning architectures for real-time crop leaf disease detection integrated with mobile apps.

AI Medical Diagnostics Guided multi-class heart sound analysis using deep neural networks for automated cardiac diagnostics.

Wireless Networks Supervised the *G-MAUT* hybrid framework for optimal cluster head selection in scalable sensor networks.

CERTIFICATIONS

Cisco Certified Network Associate (CCNA R&S)

Microsoft Certified Solutions Expert (MCSE)

Certificate of Excellence in CCTV Systems

Certificate in Computer Applications (CCA)

SKILLS

AI/Machine Learning | Networks & Systems Security | Cloud Systems Administration

PUBLICATIONS

Retrieval Augmented Generation (RAG): Enhancing the Accuracy, Reliability, and Trustworthiness of Large Language Models for Intelligent Decision Support.

Malik, S., Soomro, A. M., Dahri, K., & Shah, H. (2026). International Journal of Advanced Research, 3(2), 402–414.

Securing Agentic Artificial Intelligence Systems: Assessing Prompt Injection, Memory Poisoning, and Autonomous Tool-Use Risks in Intelligent Applications

Ahmed, F., Shah, H., Azim, N., & Rahman, F. (2026). International Journal of Advanced Research, 3(3), 42–46.

Generative AI for Intelligent Threat Detection: A Hybrid Deep Learning Framework for Secure Digital Systems.

Malik, S., Shafique, A., Shah, H., & Ali, W. (2026). Spectrum of Engineering Sciences.

Computer Vision and Deep Learning for Climate-Resilient Agriculture: Improving Soil Health, Crop Protection, and Community Livelihoods.

Amin, B., Nasir, J., Khan, I., & Shah, H. (2026).4.Journal of Climate and Community Development, 5(2), 402–414.

Securing the Internet of Things: Deep Learning Driven Intrusion Detection With Missing Data Imputation

Shah, H., Farman, H., Jan, B., Khalil, A., & Nasralla, M. M. (2025).5.IEEE Access, 13, 146476–146491. DOI: 10.1109/ACCESS.2025.3599931

Urdu News Clustering Using K-Mean Algorithm on the Basis of Jaccard Coefficient and Dice Coefficient Similarity.

Rahman, Z., Hussain, A., Shah, H., & Arshad, M. (2021).6.ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal, 10(4), 381–399. DOI: 10.14201/ADCAIJ2021104381399

Priority-Based Ranking Using Optimization Model for Cricket Team Performance.

Khan, S., Faisal, F., Shah, H., & Waheed, K. (2021).International Review of Basic and Applied Sciences, 9(3).

Enhancing the Quality of Service of Cloud Computing in Big Data Using a Virtual Private Network and a Firewall in Dense Mode.

Shah, H., Din, A. U., Abizar, A., Khan, A., & Din, S. U. (2020).8.International Journal of Advanced Computer Science and Applications, 11(3).

Performance Analysis of MPLS and Traditional IP in Node-Scalable Networks

Arshad, M., Rukh, L., Shah, H., Khan, B., Jan, N., & Ali, S. (2019).9.Journal of Independent Studies and Research.

HONOURS AND AWARDS

[01/09/2016] The University of Agriculture, Peshawar
Prime Minister's Fee Reimbursement Award: MS Degree

[03/09/2012]
Competitive Track & Field Athlete: Multi-time winner (1st Position in High Jump & Long Jump; 2nd Position in Cross-Country & 800-Meter Race) at Intervarsity and Inter-Collegiate Tournaments

LANGUAGE SKILLS

English

LISTENING: B2 READING: B2 WRITING: C1
SPOKEN PRODUCTION: B2
SPOKEN INTERACTION: B2

Urdu

LISTENING: C1 READING: C2 WRITING: C2
SPOKEN PRODUCTION: C2
SPOKEN INTERACTION: C2

Arabic

LISTENING: A1 READING: A2 WRITING: A1
SPOKEN PRODUCTION: A1
SPOKEN INTERACTION: A1

RECOMMENDATIONS

Name: Prof. Dr. Muazzam Ali Khattak

Tenured Professor, Department of Computer Science, Quaid-i-Azam University Islamabad, Pakistan.

Email: Muazzam.khattak@qau.edu.pk

Name: Dr. Haleem Farman

Assistant Professor, Department of Computer Science, Islamia College, Peshawar, Pakistan.

Email: Haleem.farman@icp.edu.pk