



MUHAMMAD HASNAIN

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Passport: SL6806891 **Date of birth**: 27/06/1998 **Nationality**: Pakistani

ABOUT ME

As a passionate researcher with a strong academic background, I hold a BS in Computer Science from Qurtuba University, D.I. Khan. I am currently working at the International ComSens Lab, National Yunlin University of Science and Technology, Douliu, Taiwan. My interests lie in Artificial Intelligence, Machine Learning, Deep Learning and Data Science, with a particular focus on developing intelligent systems for real-world problem-solving. I am deeply engaged in research on predictive modeling, data-driven decision-making, and algorithmic optimization. My work reflects a commitment to continuous learning, innovation, and the practical application of emerging technologies to advance the field of Artificial Intelligence.

WORK EXPERIENCE

International ComSens Lab, National Yunlin University of Science and Technology

City: Douliu | **Country**: Taiwan

[09/02/2023 – Current] **Research Associate**

- Conducted research in Artificial Intelligence, Machine Learning, and Deep Learning, focusing on healthcare applications, Internet of Sensor Things, and smart city functions (Electricity Theft Detection).
- Explored innovative ways to leverage AI and ML/DL for improving healthcare outcomes and optimizing smart city operations.
- Delivered lectures and lab sessions on Programming for AI, providing undergraduate students with foundational AI development knowledge.
- Guided undergraduate students in their research projects, supporting them in refining ideas and methodologies.
- Mentored junior researchers, helping them prepare for research roles and presentations.
- Guided research techniques, academic writing, and presentation skills, preparing them for future careers in AI, machine learning, and deep learning.

EDUCATION AND TRAINING

[05/09/2018 – 05/01/2023] **Bachelor in Computer Science**

Qurtuba University of Science & Information Technology <https://www.qurtuba.edu.pk/>

City: Dera Ismail Khan | **Country**: Pakistan |

[11/04/2016 – 28/07/2018] **Intermediate in Computer Science (ICS)**

Haad School and College, Dera Ismail Khan.

City: Dera Ismail Khan | **Country**: Pakistan |

[14/04/2012 – 31/10/2014] **Secondary School Certificate (SSC)**

Mufti Mehmood Public School and College, Dera Ismail Khan <https://www.facebook.com/p/Mufti-Mahmood-College-100066810242525/>

City: Dera Ismail Khan | **Country**: Pakistan |

[01/01/2019 – 19/12/2019] **Diploma In Information Technology**

Government College of Management and Sciences Dera Ismail khan

City: Dera Ismail Khan | Country: Pakistan |

[05/02/2010 – 10/06/2013] **Hafiz-ul-Quran**

Jamia Tarteel Ayesha Sadiqa, Dera Ismail Khan

City: Dera Ismail Khan | Country: Pakistan |

SKILLS

Python | MS Visio | C++ | C# | Data Preprocessing | Data Collection | Data Visualization | Machine Learning | Deep Learning | Artificial intelligence | WordPress | Data Analysis | Latex | IoT (Internet of Things) | Neural Networks | Optimization Techniques | Research Methodology | Simulations | Algorithm Development | Statistical Modeling | Predictive Modeling | Problem Solving | Data Science | Smart Grids | Wireless Sensor Networks

PUBLICATIONS

- [2025] [**VahigoNet: Leveraging Deep Learning for Transparent and High-Performance Hypertension Prediction**](#)
Journal Name: Concurrency and Computation Practice and Experience | **Volume, Issue and Pages:** Vol. 37, Issue 27-28, pe70420 | **Publisher:** Wiley
- [2025] [**An Intelligent and Explainable Intrusion Detection Framework for Internet of Sensor Things using Generalizable Optimized Active Machine Learning**](#)
Authors: Vol. 245, p104358 | **Journal Name:** Journal of Network and Computer Applications | **Publisher:** Elsevier
- [2025] [**An AI explained data-driven framework for electricity theft detection with optimized and active machine learning**](#)
Journal Name: Applied Energy | **Volume, Issue and Pages:** Vol. 401, p126632 | **Publisher:** Elsevier
- [2024] [**Applying Advanced Data Analytics on Pregnancy Complications to Predict Miscarriage With eXplainable AI**](#)
Journal Name: IEEE Access | **Volume, Issue and Pages:** Vol. 12, p176845 - 176862 | **Publisher:** IEEE
- [2025] [**An Optimized Dual Attention Pointer Hybrid Framework for Intelligent Intrusion Detection in IoT \(Accepted\)**](#)
Journal Name: IEEE MECOM | **Publisher:** IEEE
- [2025] [**LOADED: A New AI based Framework for Electricity Theft Detection in Smart Grids \(Accepted\)**](#)
Journal Name: IEEE MECOM | **Publisher:** IEEE
- [2025] [**MALOS-IoT: A Multi-Stage Advance Learning and Optimization Framework for IoT Intrusion Detection \(Accepted\)**](#)
Journal Name: IEEE WINCOM | **Publisher:** IEEE
- [2025] [**An AI-Driven Strategy for Threat Detection in Wireless Sensor Networks Using Machine Learning, Active Learning, and Optimization \(Accepted\)**](#)
Journal Name: IEEE GLOBECOM | **Publisher:** IEEE

LANGUAGE SKILLS

Mother tongue(s): Urdu

Other language(s):

English

LISTENING B2 READING B2 WRITING B2

SPOKEN PRODUCTION B2 SPOKEN INTERACTION B2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user