

ZAKAWAT LIAQAT

AI Researcher | Explainable AI | Cybersecurity | Federated Learning | Intelligent Healthcare Systems

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🎓 Google Scholar:

https://scholar.google.com/citations?user=szZGz_YAAAAJ&hl=en&authuser=1&oi=ao

Summary

Research-driven AI researcher and Computer Science academic with expertise in Explainable Artificial Intelligence (XAI), Cybersecurity, Edge AI, and Intelligent Healthcare Systems. Published author of IEEE and Springer research papers focusing on trustworthy machine learning, anomaly detection, federated and edge-based AI frameworks, and privacy-aware intelligent systems for real-world applications. Experienced in academic research, teaching, and the development of scalable AI-driven solutions using Python and machine learning technologies. Actively pursuing PhD opportunities in Europe with the long-term goal of contributing to advanced research in trustworthy and human-centered AI, particularly in cybersecurity, healthcare, and next-generation intelligent systems.

Technical Skills

Python, Machine Learning, AI, Cybersecurity, Cloud Computing, ITIL, SQL (MySQL, SQLite), Django, Laravel, REST APIs, HTML, CSS, JavaScript, PHP, CMDB, Asset Management

Research Areas

Explainable & Trustworthy AI, AI for Cybersecurity, Federated Learning, Edge AI Systems, Intelligent Healthcare Technologies, Privacy-Preserving Machine Learning

Research Experience

- Published peer-reviewed research papers in top-tier Elsevier journals, as well as IEEE and Springer conference proceedings in the fields of Explainable AI, Federated Learning, Cybersecurity, and Intelligent Healthcare Systems.
- Experience in academic writing, literature review, manuscript preparation, and interdisciplinary AI research.
- Research focus on trustworthy and privacy-preserving intelligent systems for real-world applications.

Publications

1. **Liaqat, Z., et al. (2026).**
Privacy preserving federated fine tuning of large language models for Autonomous Aerial Vehicles command generation.
Published in Elsevier Journal: Computers and Electrical Engineering.
DOI: <https://doi.org/10.1016/j.compeleceng.2026.111373>
2. **Liaqat, Z., et al. (2026).**
Empowering Remote Healthcare Through Edge-AI: A Lightweight Framework for Low-Resource Environments.
In IEEE Conference Proceedings DOI: <https://ieeexplore.ieee.org/document/11433155>
3. **Liaqat, Z., et al. (2026).**
A Hybrid Deep Learning Framework for Anomaly Detection in Financial Transactions with SHAP-Based Explainability.
In IEEE Conference Proceedings DOI: <https://ieeexplore.ieee.org/document/11433139>

4. **Liaqat, Z., et al. (2025).**

Blockchain-Enabled Federated Explainable AI for Robust Cyber Threat Detection in Smart Healthcare Systems.

Published in Springer Conference Proceedings.

DOI: https://link.springer.com/chapter/10.1007/978-981-95-8660-8_41

Education

Master of Science (MS) in Computer Science

Bahria University — Lahore Campus **CGPA:** 3.17 / 4.00 | **Completed:** May 2024

Master's Thesis: *An Investigation of Challenges in Software Engineering for Robotics*

Relevant Coursework:

Advanced Theory of Computation, Advanced Design & Analysis of Algorithms, Advanced Computer Architecture, Advanced Operating Systems, Advanced Data Mining, Computer Vision, Advanced Usability Engineering, Research Methodology

Research Focus:

Artificial Intelligence, Explainable AI, Intelligent Systems, Cybersecurity, Human Centered AI, and Software Engineering for Emerging Technologies.

Bachelor in Information Technology & Commerce

University of the Punjab & University of Sargodha - Completed: 2015

Relevant Coursework:

Artificial Intelligence, Software Engineering, Operating Systems, Database Systems, Data Structures & Algorithms, Computer Networks, Theory of Automata, Business Statistics, Financial Accounting

Experience

Computer Science Faculty | Riphah International University | 02/01/2025 – 19/12/2025

- Delivered courses in Computer Science and Artificial Intelligence
- Contributed to curriculum and infrastructure development

Digital Transformation Manager | NEST Institutes | 01/04/2019–01/01/2025

- Led digital transformation initiatives and enterprise system optimization using ITIL-based operational methodologies.

Software & Systems Developer | Airlinx Systems Pvt Ltd. | 01/08/2015–31/03/2019

- Developed web applications and backend systems
- Designed secure databases and APIs

Languages

- English (C1), Dutch (A2)

References

1. Name: Dr. Abdul Hafeez

Position: Associate Professor,
Department of Computer Sciences

Institution: Bahria University
Lahore Campus

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Phone: +923354224793

Relationship: Professor

2. Name: Dr. Khawaja Qasim

Position: Senior Assistant Professor
& Head of Department (HoD),
Department of Computer Sciences

Institution: Bahria University
Lahore Campus

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Phone: +923224544051

Relationship: Department Head
(taught Advanced Computer
Architecture)