

AIZA SHABIR

Lecturer, Computer Science | Specialist in CBIR, Computer Vision & Deep Learning

Fiaz e aam homes, Nawab Pur Road, Multan, Punjab

Email: aiza.6322@wum.edu.pk | Phone: 0333-6024757 | Domicile: District Muzaffar Garh, Punjab

EDUCATION

Degree	Year	Institution	CGPA / %	Major / Minor
Ph.D. in Computer Science	2020 – present	B.Z.U Multan	In progress	Machine Learning, Image Processing, Wireless Networks, Advanced Software Engineering, Information Security
MS, Computer Science	2012	B.Z.U Multan	3.40 / 4.0	Wireless Networks, Advanced OS, Advanced Architecture, Advanced Analysis of Algorithms
BS, Computer Science	2007	B.Z.U Multan	3.76 / 4.0	Computer Networks, Data Communications, Database Management, Software Engineering, Programming Languages
ICS	2003	B.I.S.E, D.G. Khan	66%	Computer Sciences, Mathematics, Economics
Matriculation	2001	B.I.S.E, D.G. Khan	78%	Physics, Chemistry, Biology

WORK EXPERIENCE

Jan 2017 – Present — The Women University Multan

Position: Lecturer (BS & Master level, CS/IT)

Teaching:

- Artificial Intelligence
- Object Oriented Programming
- Web Programming
- Operating Systems
- Computer Networks
- Compiler Construction

Responsibilities:

- Functions and Seminar In-charge
- Examination In-charge
- Final Year Project Supervisor
- Admission In-charge
- Class Coordinator
- Lab In-charge

Apr 2014 – Jan 2017 — Govt. College for Elementary Teachers, Muzaffar Garh

Position: Subject Specialist (IT)

Teaching:

- Use of Computer in Education
- ICT and its Applications

Responsibilities:

- Computer Short Courses
- Conducted PD Days
- Master Trainer in Induction Training

Aug 2009 – Apr 2014 — Govt. Girls High School Basira, M. Garh

Position: SST (IT) — SSC Level Classes

Teaching:

- Computer Education
- Programming Logic & Applications
- MS Word, PowerPoint, Excel

Responsibilities:

- Installation, maintenance & up-gradation of Client/Server Network and software (N-Computing)
- Lab Maintenance
- School Administration
- Online Admissions and Training

THESIS

Detection of Malicious Traffic in MANETs

Proposed a hybrid technique for detecting and identifying gray-hole attacks in MANETs using the AODV routing protocol. Statistical analysis (Ahsen et al., 2007) was performed by designing matrices, with global analysis of nodes based on threshold values; when a node was found malicious, local analysis (Buchegger, 2002) identified its position by monitoring neighboring node behavior. The technique aimed to enhance network throughput and reduce packet drops caused by gray-hole attacks.

Language / Tools: OMNeT++, VC++

RESEARCH PUBLICATIONS

1. K. Kanwal, S. Noor-ul-ain Bukhari, A. Tahreem, S. Suleman, F. Zulfiqar, A. Shabir (2026), "An ANOVA-SMOTE-Based Framework for Multi-Class Autoimmune Disease Classification," *Journal of Computing & Biomedical Informatics*, vol. 11, no. 1. DOI: 10.56979/1101/2026/1257.
2. K. Kanwal, A. Shabir, T. Abbas, M. Hameed, A. Khan (2026), "Enhanced Visual Content Retrieval via Hierarchical Deep Fusion of Multi-Level CNN Features," *The Visual Computer*.
3. A. Shabir, K. T. Ahmed, K. Kanwal, A. Mehmood, N. Abdel Samee, M. T. Naseem, I. Ashraf (2025), "Advanced Multilevel Feature Fusion Framework for Enhanced Image Retrieval Using CNN and Benchmark Datasets," *Journal of Big Data*.
4. A. Shabir, K. T. Ahmed, A. Mahmood, H. Garay, L. E. Prado González, I. Ashraf (2025), "Deep Image Features Sensing with Multilevel Fusion for Complex Convolution Neural Networks & Cross Domain Benchmarks," *PLOS ONE*.
5. K. Kanwal, I. Batool, I. Naz, A. Shabbir, M. Fatima, H. B. Gill (2025), "Automated Detection of Gallstone Disease Using Machine Learning Techniques: A Data-Driven Approach," *Statistics, Computing and Interdisciplinary Research*.
6. F. Bukhari, H. I. Younas, A. Shabir, M. Hameed, et al. (2025), "Automated Detection of Celiac Disease Using Machine Learning Algorithms," *Spectrum of Engineering Sciences*.
7. K. Kanwal, K. T. Ahmad, A. Shabir, L. Jing, H. Garay, L. E. P. Gonzalez, H. Karamti, I. Ashraf (2025), "Efficient CNN Architecture with Image Sensing and Algorithmic Channeling for Dataset Harmonization," *Scientific Reports*.
8. A. Shabir, M. Mujahid, K. Kanwal (2025), "LWFDL: Lightweight Fusion Deep Transfer Learning for Oral Squamous Cell Carcinoma Diagnosis Using Histopathological Oral Mucosa," *Multimedia Tools and Applications*.
9. K. Kanwal, M. Abubakar, A. Shabbir, L. Rehman, H. Ayesha, et al. (2024), "Effective Deep Ensemble Methods for the Detection of Lung Cancer with SMOTE," *Research*.
10. A. Shabir, K. T. Ahmed, K. Kanwal, A. Almas, S. Raza, et al. (2024), "A Systematic Review of Attention Models in Natural Language Processing," *Statistics, Computing and Interdisciplinary Research*, vol. 6, pp. 33–56.
11. A. Shabir, K. Kanwal, H. Ayesha, A. Almas, S. Raza, et al. (2024), "A Hybrid Cognitive Radio Reporting Scheme for Wireless Regional Area Networks," *Journal of Computing & Biomedical Informatics*.
12. A. Shabir, F. Syed, H. B. Gill (2024), "Selecting Suitable Requirement Elicitation Technique for Development Methodologies," *Machines and Algorithms*.
13. K. T. Ahmed, M. Fatima, S. UmmeSafi, A. Shabbir, N. Shahid, et al. (2024), "Architectural Formation with Deep Learning and Algorithmic Bindings for Cross-Domain Information Retrieval," *Journal of Computing & Biomedical Informatics*, vol. 7, pp. 459–475.
14. K. T. Ahmed, S. Sarwar, A. Shabbir, N. Sattar, N. Saeed, et al. (2024), "Embedded Descriptor Carriers Computation Using Multi-Layer Neural Networks on Large Datasets," *Journal of Computing & Biomedical Informatics*, vol. 7.
15. K. T. Ahmed, N. Shahid, A. Shabbir, M. Y. Khan, M. Hameed (2024), "Signature Elevation Using Parametric Fusion for Large Convolutional Network for Image Extraction," *VFAST Transactions on Software Engineering*, vol. 12, pp. 174–191.
16. K. Kanwal, M. Mujahid, A. Shabir, S. Raza, M. Fatima, et al. (2024), "A Novel Ensemble Framework for Breast Cancer Detection Using Ultrasound Imaging and Advanced Augmentation Techniques," *Statistics, Computing and Interdisciplinary Research*, vol. 6, pp. 1–18.
17. K. Kanwal, K. T. Ahmad, N. Ali, R. Khan, A. T. Abbas, A. Shabir, et al. (2022), "Deep Image Sensing & Architectural Bonding, Signature Influencing, Datasets Harmonizing and Algorithmic Channelizing Impact on Complex CNN," *SSRN Electronic Journal*.
18. A. Shabbir, Q. Rasool, F. Ahsan, M. A. Khan, A. Karim (2013), "A Layered Approach for Detecting Gray Hole Attacks in MANETs," *Sindh University Research Journal (Science Series)*, vol. 45(A-1), pp. 217–220.

SKILLS

Research Specialties: Content-Based Image Retrieval (CBIR), Computer Vision, Deep Learning, Convolutional Neural Networks, Machine Learning, Image Processing, Natural Language Processing.

Programming & Tools: Python, C++, Java, TensorFlow/Keras, PyTorch, OpenCV, MATLAB, OMNeT++, SQL.

Technical: Model Design & Evaluation, Feature Fusion Frameworks, Dataset Harmonization, Academic Writing & Publishing, Curriculum Design, Research Supervision.

Interpersonal: Team worker, punctual, reliable, and organized.

Communication: People-oriented with strong written and verbal communication skills.

ACTIVITIES & INTERESTS

- Graphics Designing
- Web Development
- Software Development

REFERENCES

Available on request.