USMAN HUMAYUN (PhD, MEng, BEng)

Academician | Computer Engineer | CCNA Certified

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EDUCATION

PhD (Electrical Engineering)	Universiti Teknologi Malaysia – 2025
Masters (Computer Engineering)	Islamia University Bahawalpur Pakistan – 2015
Bachelors (Computer Engineering)	Institute of Engineering & Technology Pakistan – 2008

WORK EXPERIENCE

Assistant Professor	Department of Computer Engineering Faculty of Engineering Bahauddin Zakariya University Pakistan (2025 – Present)
Lecturer	Department of Computer Engineering Faculty of Engineering Bahauddin Zakariya University Pakistan (2009 – 2025)

TEACHING RESPONSIBILITIES

Ongoing Undergraduate Courses	Computer Fundamentals, Circuit Analysis, Programming Techniques, Computer Organization, Database Management Systems, Computer Communication and Networks, Software Defined Networks	
Supervision	Current Students	(Undergraduate: 4, Masters: 2)
	Graduates	(Undergraduate: 30, Masters: 6)

ADMINISTRATIVE RESPONSIBILITIES

- Departmental Controller Examination to deal with the Semester System under OBE (Outcome-Based Education).
- Departmental coordinator for the matters related to Pakistan Engineering Council (PEC).
- Remained Head of Computer Engineering Department (Jan-2016 to Jan-2017).
- Remained Member of Board of Studies (BOS) for the designing of curriculum under semester system.
- Remained Member of admission committee of all engineering programs in faculty of engineering.
- Internal and external examiners for viva voce and thesis evaluation.
- Remained In-charge of Computer Networks lab (2012-2015).

RESEARCH

- The PhD dissertation title is “Improved Flow Table Management for Software Defined Networks Using Dynamic Timeout with Proactive Eviction”. The link for google scholar is https://scholar.google.com/citations?user=EzdXbWMAAAAJ&hl=en. Some of the publications are:

1. * Humayun, Usman, et al. "Dynamic-timeout prediction and proactive eviction for SDN flow table overflow mitigation." *Cluster Computing* 28.7 (2025): 456.
2. * Humayun, Usman, Mosab Hamdan, and Muhammad N. Marsono. "Early flow table eviction impact on delay and throughput in software-defined networks." *2021 11th IEEE International Conference on Control System, Computing and Engineering (ICCSCE)*. IEEE, 2021.
3. Hamdan, Mosab, et al. "Flow-aware elephant flow detection for software-defined networks." *IEEE Access* 8 (2020): 72585-72597.
4. * Humayun, Usman, et al. "Deep Learning Approaches for Brain Tumor Detection and Segmentation in MRI Imaging." Journal of Computing & Biomedical Informatics 8.01 (2024).
5. * Humayun, Usman, et al. "Jellyfish Algorithm for Feature Selection: Improving Machine Learning-Based Heart Disease Prediction." Journal of Computing & Biomedical Informatics 8.02 (2025).
6. Haider, S. A., Ashraf, S., Larik, R. M., Husain, N., Muqeet, H. A., Humayun, U., ... & Khan, M. F. (2023). An Improved Multimodal Biometric Identification System Employing Score-Level Fuzzification of Finger Texture and Finger Vein Biometrics. Sensors, 23(24), 9706.

PROFESSIONAL DEVELOPMENT AND CERTIFICATION

- Registered Engineer of Pakistan Engineering Council (PEC) having PEC Registration No. COMP/5248.
- I am CCNA Certified having the following credentials:

Cisco ID No.: CSCO11897713

Certificate Verification No.: 405524168421EOWG.

TEACHING SKILLS

Teaching using LMS (Learning Management System), Curriculum designing, lesson planning, setting exams, online education, teaching strategies, electronic presentation skills, course files management.

IT SKILLS AND TECHNICAL KNOWLEDGE

- **Advanced Computer Skills** – Mininet, SDN Hub, Ryu Controller, OpenFlow Protocol 1.4, Prediction in Machine Learning, Research Analysis, Wireshark network traffic analysis.
- **Hardware Skills -** Network Configuration, Technical Support, Desktop Support, TCP/IP, DNS, DHCP, WAN/LAN, SDN, Windows, Linux, Ubuntu, Network Automation.
- **Software Skills –** C/C++, Java, MySQL, Python (Limited), Matlab, SMP (Symmetric Multiprocessor) Simulator.
- **Operating Systems -** Linux, Windows.
- **Database Management -** Working knowledge of SDLC (Software Development Lifecycle), different software testing methodologies, knowledge of ERD’s.