

Muhammad Zunnurain Hussain

PhD | Senior IEEE Member | AWS Educator | IBM Cybersecurity Analyst

Vice President, Cybersecurity Architecture • Assistant Professor, Bahria University

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🌐 ORCID: 0000-0002-6071-1029
📄 Google Scholar: 386 citations
📍 London, UK • Lahore, PK

PROFESSIONAL SUMMARY

Cybersecurity academic and industry strategist with 17+ years spanning Fortune 100 advisory, cloud-native security architecture, and university-level education. PhD in IoT Security (Universiti Putra Malaysia), Senior IEEE Member, and Aviatix Certified Engineer. Current research focuses on IoT security, ML-based intrusion detection, and cloud security, with 386+ Google Scholar citations across 30+ indexed publications in IEEE Access, Q1/Q2 international journals, and peer-reviewed conferences. Holds leadership positions as VP Cybersecurity Architecture at Zee Outsourcing Solutions, Director at RGP Global IT London, Assistant Professor and Cluster Head at Bahria University Lahore, and IEEE Branch Manager.

RESEARCH INTERESTS

- IoT Security
- Machine Learning for Cybersecurity
- Cloud Security (AWS/Azure/GCP)
- Intrusion Detection
- Zero Trust Architecture
- RPL Protocol Security
- Federated Learning
- Blockchain-IoT Integration
- DevSecOps

PROFESSIONAL EXPERIENCE

Vice President, Cybersecurity Architecture & Resilience • [Zee Outsourcing Solutions PVT LTD \(Remote, London\)](#)
May 2025 – Present

- Lead enterprise-wide cybersecurity architecture across multi-cloud (AWS, Azure, GCP), on-premises, and hybrid environments serving Fortune 100 clients.
- Drive AI/ML-based threat detection initiatives and champion Zero Trust Architecture aligned with NIST CSF and ISO 27001.
- Oversee cyber resilience programs including incident response and disaster recovery; collaborate directly with CISO and CIO on security-by-design.

Director, IT Strategy & Governance • [RGP Global IT, London, UK \(Remote\)](#)
Jul 2023 – Present

- Align technology frameworks with business objectives and deliver compliance advisory for federal technology security mandates.
- Lead cross-functional IT teams, spearhead infrastructure upgrades, and manage hardware/software asset governance.

Chief Technology Officer • [Zee Outsourcing Solutions PVT LTD \(Remote, London\)](#)
Oct 2023 – May 2025

- Developed and executed technical strategy; built QA and data protection processes; monitored KPIs and managed IT budgets.
- Supervised end-to-end system infrastructure for reliability, performance, and scalability.

Assistant Professor — Computer Science • [Bahria University Lahore Campus, Pakistan](#)
Jul 2019 – Present

- Teach Cloud Computing, Cybersecurity, Data Encryption, and Data Communication Networking at undergraduate and postgraduate levels.
- Provide hands-on AWS, Azure, GCP, Kubernetes, and Linux lab training; mentored teams in Cloud Seekho Challenges and MHacks 2019.
- Supervise Final Year Projects; serve as Cluster Head (ADP-CS) and FYP Coordinator, overseeing curriculum review and faculty alignment.
- Led university accreditation processes and fostered industry linkages to improve student employability.

IEEE Branch Counselor & Manager • [IEEE Lahore Chapter, Pakistan](#)
Jun 2024 – Present

- Lead the Lahore IEEE chapter: drive membership growth, oversee operations and budget, ensure compliance with IEEE policies.
- Organise technical seminars, workshops, and networking events advancing professional development in the region.

- Share technical content on IBM Watson, Cloud, Security, and Quantum; mentor new community members and represent IBM at events.

EDUCATION

Doctor of Philosophy — Computer Science (IoT Security) • Universiti Putra Malaysia (UPM) 2020 – 2023

- Thesis: Performance Modeling for Communication Networks | Grade: A–
- Best Paper Award: "IoT Security Issues in Low Power Networks," ICICSE 2021.
- Research collaborators: Dr. Zurina Mohd Hanapi, Dr. Azizol Abdullah, Dr. Masnida Hussin (UPM).

Master of Science — Computer Networking • University of Bedfordshire, UK 2012 – 2013

- Grade: B– | Courses: Computer Security, Network Systems, Wireless Networking

Bachelor of Science — Telecommunication Engineering • [Undergraduate Institution] ~2007 – 2011

- Foundation in networking, electronics, and systems engineering.

SELECTED PUBLICATIONS (30+ INDEXED; 386+ CITATIONS — GOOGLE SCHOLAR)

[2024] Shahid, U., Hussain, M. Z., Hasan, M. Z., Haider, A., Ali, J., & Altaf, J. Hybrid Intrusion Detection System for RPL IoT Networks Using Machine Learning and Deep Learning. IEEE Access, DOI: 10.1109/ACCESS.2024.3442529.

[2024] Hussain, M. Z. et al. (Chapter 9) Implementation of a Blockchain-Based Secure Cloud Computing Mechanism for Transactions. In Blockchain-Based Internet of Things: Opportunities, Challenges and Solutions, 1st ed. Chapman & Hall.

[2023] Hussain, M. Z., Sarwar, N. et al. IoT Network Anomaly Detection in Smart Homes Using Machine Learning. IEEE Access (accepted).

[2022] Hussain, M. Z. et al. Efficient Secure Routing Mechanisms for the Low-Powered IoT Network. International Journal, Q1, Impact Factor 2.3.

[2022] Hussain, M. Z. et al. Deep Insight into IoT-Enabled Agriculture and Network Protocols. International Journal, Q2, Impact Factor 3.8.

[2021] Hussain, M. Z. et al. Cloud Application Importance and Challenges: A Systematic Review. International Conference on Innovative Computing (ICIC 2021). IEEE.

[2021] Hussain, M. Z., Hasan, M. Z., Sarwar, N. et al. Data Security and Integrity in Cloud Computing. ResearchGate / Conference.

Full publication list: scholar.google.com/citations?user=Ko_4nfkAAAAJ | ORCID: 0000-0002-6071-1029

CERTIFICATIONS & PROFESSIONAL CREDENTIALS

• IBM Cybersecurity Analyst Professional Certificate (V2) — IBM / Coursera	Jul 2025
• Aviatrrix Certified Engineer (ACE) — Aviatrrix	Active
• AWS Educator / AWS Academy Instructor — Amazon Web Services	Active
• Google Cloud Professional (GCP Expert) — Google	Active
• AI Concepts and Strategy — Rutgers University / Coursera	Mar 2025
• Gmail for Automated Financial Reporting — Coursera	Mar 2025
• Top Performer — DLSEI Y1-C1 & DLSEI-23 — Higher Education Commission (HEC), Pakistan	Jan 2023 & 2025
• Microsoft Azure AI / DevOps / Fabric Badges — Microsoft Learn (multiple)	2024–2025
• GitHub Copilot / GitHub Actions Badges — GitHub / Microsoft Learn	2024–2025

Full verified badge portfolio: credly.com/users/muhammad-zunnurain-hussain

HONOURS & AWARDS

- Best Paper Award — "IoT Security Issues in Low Power Networks," 5th International Conference on Interdisciplinary Computer Science and Engineering (ICICSE 2021).
- Top Performer — HEC DLSEI Y1-C1, Higher Education Commission Pakistan, January 2025.
- Top Performer — HEC DLSEI-23, Higher Education Commission Pakistan, January 2023.
- 67+ professional recommendations on LinkedIn from peers, students, and industry leaders.

TECHNICAL SKILLS

Cloud & DevSecOps	AWS (Security Hub, GuardDuty, CloudTrail, IAM, EKS), Azure (Sentinel, Security Center), GCP (SCC), Kubernetes, Terraform, AWS CDK, GitHub Actions
Security Tools	Burp Suite, Nessus, Metasploit, OpenVAS, Wireshark, Nmap, Hydra
SIEM / XDR	QRadar, Splunk, SentinelOne, CrowdStrike Falcon, Carbon Black
Forensics	FTK, Autopsy, X-Ways, SIFT Workstation
Networking	TCP/IP, BGP, OSPF, CiscoWorks, GNS3, Cisco switching/routing
Virtualisation	VMware, Hyper-V, VirtualBox
Email Security	Proofpoint, Mimecast, Microsoft 365 Defender
ML / AI	Python (scikit-learn, TensorFlow, PyTorch), federated learning, anomaly detection, IDS/IPS ML models

PROFESSIONAL AFFILIATIONS

- Senior Member, IEEE (ID: zunnurain.hussain@ieee.org)
- Professional Member, ACM (ID: 5767412)
- Member, IET (ID: 1106900954)

LANGUAGES

English — Full Professional Proficiency | Chinese — Limited Working Proficiency | Malay-----Limited Working Proficiency

ONLINE PROFILES

Google Scholar: scholar.google.com/citations?user=Ko_4nfkAAAAJ | **ORCID:** orcid.org/0000-0002-6071-1029
Credly Badges: credly.com/users/muhammad-zunnurain-hussain | **Google Skills:** skills.google/public_profiles/455dbcd3-6946-4250-a6a3-4e6657530df4
LinkedIn: linkedin.com/in/muhammad-zunnurain-hussain-50641b61