Zulqar Nain,Ph.D

Data Scientist, Showcare Events Solutions Inc, Canada

znain@showcare.com | Personal Website | Linked-in Profile

EXPERIENCE

Data Scientist Full-time

Showcare Event Solutions

May 2024 – Present | Showcare Event Solutions, Canada

- Extracting and interpreting data from company databases to enhance marketing efforts, product innovation, and overall business strategies.
- Utilizing predictive modeling techniques to maximize revenue growth, optimize marketing initiatives, and enhance customer experiences.
- Creating and executing A/B testing frameworks to assess and improve model performance.
- Collaborating with various teams to deploy data-driven strategies and monitor their effectiveness.

Assistant Professor Full-time

Woosong University

March 2023 – May 2024 | Woosong University, South Korea

- Teaching courses to undergraduate/post-graduate students.
- Conducting Research and Publishing Articles in SCI journals.
- Writing proposals to secure funding for projects.
- Supervising and mentoring students.

Assistant Professor Full-time

Yeungnam University

March 2022 – February, 2023 | Yeungnam University, South Korea

- Teaching Applied Embedded System (0331-01) course to post-graduate students.
- Conducting Research and Publishing Articles in SCI journals.
- Writing proposals to secure funding for projects.
- Supervising and mentoring graduate students

Technical Lead (Freelance)

Mission

Apr. 2021 – February, 2022 | Remotely

Project: Virtual Event Platform

- Worked as a technical architect
- Led the software development and performed Code reviews and solution design

Lecturer Full-time

Government Post-Graduate College, Mandian

2018 – 2019 | Abbottabad Pakistan

- Taught the following courses to undergraduate students of BS(CS) and BS(IT).
  - Introduction to Information and Communication Technologies (CSC111)

RESEARCH INTERESTS

- Intelligent routing protocols for optical network-on-chip architectures and IoT devices
- Application mapping approaches for network-on-chip architectures.
- Service offloading (SO) and scheduling in cloud computing.

TECHNICAL SKILLS

Programming Languages

Python
C/C++
PHP/Laravel
Node.js/React.js/Typescript

Simulators

Cooja Emulator
Nirgam/NoC Tweak
NS3
Matlab

EDUCATION

Doctor of Philosophy in Information and Communication Engineering

Yeungnam University

2019 – 2022 | South Korea

- Thesis title: A Reinforcement Learning-Based Intelligent Route Update Scheme for Future Generation IoT Networks.

Master of Science in Computer Science

COMSATS University Islamabad

2016 – 2018 | Wah Cantt, Pakistan

- Thesis title: Novel Fault-tolerant Routing Scheme for 2D Mesh Based on Chip Architectures .

Bachelor of Science in Computer Science

Virtual University of Pakistan

2011 – 2015 | Lahore, Pakistan

- Programming Fundamentals (CSC112)
- Computer Organization and Assembly Language (CSC233)
- Digital Logic Design(CSC232)
- Database Systems (CSC241)
- Information Security (CSC481)

Lecturer Visiting

COMSATS University, Islamabad

2019 – 2019 Abbottabad Pakistan

- Taught the following courses to undergraduate students of BS(SE).
  - Software Engineering Concepts(CSC291)
  - Professional Practices for IT(CSD303)

Full-stack Web Developer Part-Time (Freelance)

Upwork

2013 – 2018 Remotely

- PHP(laravel), HTML, CSS, Bootstrap, Javascript, React.js, Node.js, docker, Agile development.

PUBLICATIONS

Journal Articles Indexed by SCIE

1. Muhammad Sshareef Mekala, Gaurav Dhiman, Gautam Srivastava, **Zulqar Nain**, Haolin Zhang, Wattana Viriyasitavat, and G.P.S.Varma, "A DRL-Based Service Offloading Approach Using DAG for Edge Computational Orchestration" IEEE Transactions on Computational Social Systems, Early Access, 2022. Impact Factor = 5.36.
2. **Zulqar Nain**, Arslan Musadiq, Yazdan Ahmad Qadri, Ali Nauman, Muhammad Khalil Afzal, and S W Kim, "RIATA: A Reinforcement Learning-Based Intelligent Routing Update Scheme for Future Generation IoT Networks" IEEE Access, vol. 9, pp.81161-81172, 2021. Impact Factor = 3.367.
3. **Zulqar Nain**,Rashid Ali, Sheraz Anjum, Muhammad Khalil Afzal, and S W Kim, "A Network Adaptive Fault-Tolerant Routing Algorithm for Demanding Latency and Throughput Applications of Network-on-a-Chip Designs" MDPI Electronics, vol. 7, no. 7, pp. 1076, 2020. Impact Factor = 2.397.
4. Arslan Musaddiq, **Zulqar Nain**, Yazdan Ahmad Qadri, Rashid Ali, and S W Kim, "Reinforcement Learning-Enabled Cross-Layer Optimization for Low-Power and Lossy Networks under Heterogeneous Traffic Patterns" MDPI Sensors, vol. 20(15), pp. 4158, 2020. Impact Factor = 3.576.
5. A Musaddiq, YB Zikria, **Zulqar Nain**, and S W Kim, "Routing protocol for Low-Power and Lossy Networks for heterogeneous traffic network" EURASIP Journal on Wireless Communications and Networking , vol. 21, 2020. Impact Factor = 1.408.
6. Waqar Amin, Fawad Hussain, Sheraz Anjum, Sarzamin Khan, Naveed Khan Baloch, **Zulqar Nain**, and S W Kim, "Performance Evaluation of Application Mapping Approaches for Network-on-Chip Designs" IEEE Access, vol. 8, pp. 63607-63631, 2020. Impact Factor = 3.367
7. Ali Nauman, Muhammad Ali Jamshed, Rashid Ali, Korhan Cengiz, **Zulqar Nain**, and S W Kim, "Reinforcement learning-enabled Intelligent Device-to-Device (I-D2D) communication in Narrowband Internet of Things (NB-IoT)" Computer Communications, vol. 176, pp. 13-22, 2021. Impact Factor = 3.167.

International Conference Papers

1. Ali Rashid, **Zulqar Nain**, S W Kim, and Seok Kim Hyung, "Exponentially Distributed Random Access in LTE-A networks", in *I*nternational Symposium on Networks, Computers and Communications (ISNCC) Montreal/Canada/2020.
2. **Zulqar Nain** , Arslan Musaddiq, Yazdan Ahmed Qadri, Sung Won Kim, "History-Aware Adaptive Route Update Scheme for Low-Power and Lossy Networks", in *I*nternational Conference on Information and Communication Technology Convergence (ICTC) Jeju/South Korea/2021.

Patents

1. **Zulqar Nain**, and Sung Won Kim, "Method for Internet of Thing routing based on Q-learning, recording medium and device for performing the method".
2. Ali Nauman, **Zulqar Nain**, and Sung Won Kim, "Method of Radio resource scheduling for beyond-5G network using artificial intelligence" (Submitted).

Book Chapters

1. Yazdan A. Qadri, Ali Nauman, **Zulqar Nain** , Rashid Ali, and Sung Won Kim, "cobots for human surgery" in *Industry 5.0 : Towards a New Revolution and a Human-Centric Solution* by De Gruyter or Walter de Gruyter GmbH, Genthiner, Germany. (Submitted)

REFEREES

Dr. Sung Won Kim (Ph.D. Advisor)
swon@yu.ac.kr
Professor
Dept of Info and Comm Eng, Yeungnam University, South Korea

Dr. Murtaza Ahmed Siddiqi
MurtazaAhmed.Siddiqi@utsa.edu
Assistant Professor
Dept of CS, The University of Texas at San Antonio, Texas, USA

Dr.Nazeer Muhammad (MS Advisor)
nazeer.muhammad@fecid.paf-iast.edu.pk
Assistant Professor
Dept of CS, Pak-Austria Fachhochschule Institute of Applied Sciences and Technology, Haripur, Pakistan