Suleman Munawar

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Portfolio

EDUCATION:

Master of Science – Computational Science and Engineering
National University of Science and Technology (NUST), Pakistan
2023 – 2025
CGPA: 3.70/4.00

Bachelor of Science - Computer Engineering
Ghulam Ishaq Khan Institute of Engineering Sciences and Technology (GIKI), Pakistan
2017 - 2021
CGPA: 2.91/4.00

INTERNATIONAL EXPERIENCE:

Erasmus+ Mobility Program – Research Internship
Frederick University, Nicosia, Cyprus
June 2025 – November 2025 (expected)

- Conducting independent research on energy efficiency in Large Language Models (LLMs)
- Funded by the Erasmus+ program under the European Commission

PUBLICATIONS:

1. **S.Munawar**, E. I. Iredia, H. K. Qureshi, C. Chrysostomou, N. Ntetsikas, C. Liaskos, and M. Lestas, *"AoI Analysis of RIS-Assisted Vehicular Networks and the Impact on Cooperative Maneuvers"*, 2025 IEEE Vehicular Technology Conference, VTC2025-Spring, Oslo, Norway,
2. **S.Munawar**, Z. Ali, M. Waqas, S. Tu, S. A. Hassan and G. Abbas, *"Cooperative Computational Offloading in Mobile Edge Computing for Vehicles: A Model-based DNN Approach,"* in IEEE Transactions on Vehicular Technology, 2022,
3. O. Saleem, **S.Munawar**, S. Tu, Z. Ali, M. Waqas and G. Abbas, *"Intelligent Task Offloading for Smart Devices in Mobile Edge Computing,"* 2022 International Wireless Communications and Mobile Computing (IWCMC), Dubrovnik, Croatia, 2022, pp. 312- 317,

WORK HISTORY:

Front End Designer
Well Stuff Industries (Sialkot, Pakistan)
May 2022 – January 2023

- Maintained company website and online store

Data Analytics Consultant
ProntoDigital, LLC (Indiana, USA)
November 2021 – April 2022

- Provided data analytics services and developed data-driven solutions

Software Quality Assurance Intern
Afiniti Software Solutions Pvt. Ltd. (Lahore, Pakistan)
July 2020 – August 2020

- Participated in Project Trainee Program

P R O J E C T S :

Past Projects

International Airline Management System

It was developed in C++ using advanced knowledge of Linked Lists, Hash Table, and Dynamic Memory Allocation.

Task and Computational Offloading in Mobile Edge Computing using Artificial Intelligence

Designed and developed optimal offloading, computing, and receiving schemes to increase service performance, service reliability, and decrease time delay in vehicular networks, which operate via Mobile Edge Computing, this was developed using C++. A Deep Neural Network was trained, validated, and tested by self-derived datasets. The network showed an 84.9% accuracy rate.

2D Space Shooter Game

A 2D space shooter game where a player controls a spaceship to shoot down enemies and earn points. It was developed using OOP concepts and techniques in Python. Apart from the game itself, I also made a complete documentation of the game.

Chatbot Design using RAG for SINES

Designed and implemented a chatbot tailored to the specific needs of my Department (SINES) in University (NUST). Collected data using Google Forms, online scrapping, and self-collection. Used Retrieval Augmented Generation to enhance Chat Bot design. Utilized OpenAI's GPT 3.5-Turbo as Large Language Model.

Impact of Path Loss Models on Age of Information in RIS-Assisted Wireless Networks

Conducted an in-dept analysis of metrics AoI, PAoI, and probability of success, under various network conditions and various path loss models, with and without the involvement of Reconfigurable Intelligent Surfaces (RIS).

Ongoing Projects

Autonomous Vehicles via RIS-Assisted Space-Integrated 6G Networks

Developing a framework for vehicular networks using Dynamic Spectrum Access to enable Integrated Sensing and Communication (ISAC). The system integrates RIS for LOS optimization, edge computing for efficient task offloading, and LEO satellites for seamless communication.

Energy Efficiency in Large Language Models (LLMs)

Conducting independent research focused on optimizing the energy consumption of large language models (LLMs). The project explores efficient model architectures, training strategies, and deployment practices to minimize energy use while maintaining performance.

A W A R D S A N D H O N O R S :

- Second position in Final Year Project in the faculty of 'Computer Science and Engineering', GIKI, 2021
- TOEFL iBT score: 90/120 (2021)
- Google Analytics Individual Qualification: 90% (2021)

S K I L L S :

Computer Languages: C++, Python, HTML, CSS, JavaScript, PHP, LaTeX

Operating Systems: Windows, Linux

Microcontrollers: 8051, PIC, Arduino

Softwares: Dev C++, Creo, MATLAB, Keil uVision5, Proteus Design Suite, Eclipse, Adobe Photoshop, mikroC PRO for PIC, Ubuntu, WireShark, Cisco Packet Tracer, Microsoft Visio, Visual Studio Code, Google-Analytics, Google Tag Manager, Data Studio, PuTTy, WinSCP, Jupyter, RoboFlow

Extra-Curricular Skills: Pianist, Photographer, Sketcher, Badminton Player, Skateboarder

R E F E R E N C E S :

Engr. Dr. Marios Lestas
Associate Professor
Frederick University, Nicosia, Cypus
Email: eng.lm@frederick.ac.cy
Ph.D. - University of Southern California, United States

Engr. Dr. Hassaan Khaliq Qureshi
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Ph.D. - University of London, United Kingdom

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University of Greenwich, London, United Kingdom
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Ph.D. - Tsinghua University, China