

Mihiran Wickramarathne

mihiran.com

 Mihiran Wickramarathne |  miniMagic-beep |  mihiranpiumanga@gmail.com |  +94714851160

WORK EXPERIENCE

- **Research Engineer** Aug 2026 – Present
Dialog - University of Moratuwa Mobile Communications Research Laboratory
- **Visiting Instructor** Aug 2026 – Present
Department of Electronic and Telecommunication Engineering, UoM
- **Network Analytics Intern** Dec 2024 – Jun 2025
Paraqum Technologies, Sri Lanka

EDUCATION

- **B.Sc. Honors in Engineering, Electronic and Telecommunication** May 2022 – July 2026
University of Moratuwa Moratuwa, Sri Lanka
 - **First Class Honours** (GPA: 3.82/4.00)
 - **Dean's List:** Semesters 1, 2, 4, 6, 7, and 8
- **GCE Advanced Level** Nov 2020
Royal College Colombo 7, Sri Lanka
 - **3As**

PROJECTS

Internship

- **Network Analytics Intern** [Dec 2024 – Jun 2025]
[C++, Systems Programming, Network Security]
 - **Hyperscan Evaluation:** Conducted performance benchmarking and evaluation of the Hyperscan library.
 - **PQ-Alerting Node:**
 - Improved the Legacy Algorithm for the Rule Collision Solver and integrated IPv6 support in alerts.
 - Designed and implemented a new Algorithm for the Rule Collision Solver.
 - **TLS Security:**
 - Developed a TLS Certificate Verifier module.
 - Developed a TLS Handshake Verifier module.
 - **Long Session Detection:** Developed a module for detecting long sessions.

University and Personal Projects

- **Final Year Project: Split-Federated LLMs on O-RAN** Jun 2025 – July 2026
[LLMs, PyTorch, Split-Federated Learning, O-RAN] NetsLab, University College Dublin, Ireland
University of Moratuwa, Sri Lanka
 - **SplitFed Optimization:** Developing and optimizing Split-Federated Learning architectures for LLMs to address data privacy concerns and computational resource constraints.
 - **O-RAN Integration:** Preparing the optimized model for deployment on a UCD O-RAN testbed to evaluate its performance as a Root Cause Analysis System.
- **Araliya Tiny-byLLM Plugin** Aug 2025 - Sep 2025
[Python, Jac, FastAPI, LLMs] 
 - Developed a Python extension for by-llm in jac for seamless hybrid inference between TinyLlama and cloud LLMs

- Implemented an autonomous fine-tuning cycle with an OpenAI-compatible server
- **Hedwig: 3-Phase Power Monitoring System** Jan 2024 – Aug 2024
[IoT,C, ESP32, SolidWorks, MQTT] 
 - Engineered a custom ESP32 driver for the ATM90E36A metering chip to enable precision 3-phase data acquisition.
 - Built an end-to-end IoT pipeline, integrating MQTT firmware with a Node-RED dashboard and a SolidWorks-designed enclosure.
- **Orbit – Transformer Management System** Jun 2025 – Sept 2025
[Java, Spring Boot, PostgreSQL] 
 - Architected a robust RESTful API using Spring Boot and PostgreSQL to digitize thermal inspection workflows and manage transformer lifecycle data.
 - Engineered automated reporting endpoints that aggregate inspection metrics and visual evidence, significantly reducing manual data entry for maintenance teams.
- **AURA: A Synchronized Music Player** Dec 2024 - Jan 2025
[C,ESP32, Audio, IoT, Cloud] 
 - Engineered a low-latency, cloud-connected audio streaming system using snapcast, enabling synchronized multi-room playback across distributed devices.

SKILLS

- **Programming Languages:** C++, C,Python, Java
- **AI & Machine Learning:** PyTorch,LLMs,Split-Federated Learning
- **Web & Backend Frameworks:** Spring Boot, FastAPI
- **Networking:** Wireshark,Protocols and Security,GNU Radio
- **Tools & Platforms:** Git, Linux, PostgreSQL, Postman

MEMBERSHIPS

Secretary , IEEE Communications Society Student Branch Chapter, UoM	Oct 2025 – Present
Sergeant at Arms , Gavel Club, UoM	Mar 2024 – Mar 2025
Vice President , English Literature Society, UoM	Oct 2025 – Present
Department Representative , Dept. of Electronic & Telecom Engineering, UoM	May 2025 – June 2026
Communication Sub System Lead , Phoenix Cube Satellite, UoM	May 2024 – May 2026
Associate Member , Radio Society of Sri Lanka	Jan 2025 – Present
Member , IEEE Sri Lanka Section	Aug 2024 – Present
Student Member , Old Royalists Engineering Professionals' Association	May 2022 – Present

HONORS AND AWARDS

Champion 5GX HACK Netslab,UCD	Jan 2026
1st Runner-Up , IEEE ComFix (For SailLink)	Aug 2024
Dr. G.C.L. de Silva Memorial Prize , Royal College (Distinctions in G.C.E. A/L & O/L)	2020
Finalist , IEEE INSL (For PLUGSi)	Mar 2023
Finalist , Exicel Case Study Competition, Rotaract Club	Jun 2021
Finalist , SLIoT Challenge 2025 (For AURA)	April 2025

ADDITIONAL INFORMATION

Languages: Sinhala (Native), English (B2.1)

REFERENCES

Dr. Chamara Sandeepa
Postdoctoral Researcher
Network Softwarization and Security Labs (NetsLab)
University College Dublin, Ireland.
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