RUWANYA ABEYNAYAKE

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in linkedin.com/in/ruwanya-abeynayake/

○ https://github.com/RuwaAbey

🌐 ruwaabey.github.io/my-portfolio/

PROFILE SUMMARY

I am a passionate final-year undergraduate with a strong interest in telecommunication, electronics, signal processing, machine learning, computer vision, embedded system design, IoT, and hardware design. I am also an enthusiastic individual who enjoys working on projects related to these fields and thrives in leadership roles to drive projects toward success.

EDUCATION

UNIVERSITY OF PERADENIYA
2021 - PRESENT

- BSc(Hons) in Engineering
- Electrical and Electronic Engineering
- GPA: 3.45

ANULA VIDYALAYA, NUGEGODA
2006 - 2019

- GCE A/L 2019 - 3 As in Physical Science

SOFT KILLS

- Leadership & Team Collaboration
- Effective Communication
- Time Management
- Compering & Public Speaking
- Creative Arts

WORK EXPERIENCE

● **SRI LANKA TELECOM - DIGITAL LAB**
RESEARCH AND DEVELOPMENT ENGINEERING INTERN
FULL TIME - HYBRID (JULY 2024 - OCTOBER 2024)

- 5G Robotic Controller Board (link) project
- Integrated the Quectel RM500Q module with a KHADAS VIM3L SBC (Single Board Computer)
- Implemented MQTT-based control messaging and real-time video streaming using WebSockets, OpenCV, and Python asyncio, deployed on AWS EC2.

Tools & Skills: Altium Designer, RF PCB Design, SMA Connector Design, Ubuntu, AT Commands

● **ACL CABLES PLC**
ELECTRICAL AND ELECTRONIC ENGINEERING INTERN
FULL TIME - ONSITE (JULY 2023 - OCTOBER 2023)

- Gained hands-on experience in cable manufacturing, power distribution, industrial automation (PLC, circuit design), and motor technologies. Designed and wired panels (AutoCAD) with standard labeling and safety practices.

PROJECTS

● **2025 | COMPUTER VISION BASED GROUP ACTIVITY DETECTION (ONGOING)** (LINK)

- Designed a deep learning model to recognize group activities.
- Extracted and reprocessed skeleton data from video frames.

Tools & Skills: PyTorch, MMAction, MMCV, OpenCV, Scikit-learn, NumPy, SciPy, Computer Vision, Deep Learning, CNNs, Transformers, Spatiotemporal Modeling, Skeleton Pose Estimation

● **2025 | PRIVATE 5G UNIT IMPLEMENTATION (ONGOING)**

- Developing a private 5G network using the Aether platform by the Open Networking Foundation.
- Hands-on experience with Kubernetes and Ansible playbooks for orchestration.

Tools & Skills: Aether, 5G Core, Kubernetes, Ansible, Python

● **2024 | SELF-CANCELING SIGNAL LIGHT SYSTEM FOR MOTORBIKES** (LINK)

- Developed a motorbike-mounted system that automatically cancels signal lights after a turn.
- Implemented an auto-reset switch mechanism and a motion sensing model.
- Designed a Wi-Fi-based data logger for real-time data transmission.

Tools & Skills: ESP32, MPU6050, Embedded C/C++, Sensor Integration, Data Logging, IoT, Hardware design

● **2025 | HARDWARE IMPLEMENTATION OF DIFFERENTIAL AMPLIFIER (ANALOG IC)** (LINK)

● **2024 | HAND GESTURE CONTROLLED 2DOF ROBOT ARM** (LINK)

● **2023 | GRIP SENSOR FOR MEASURING ROBOT ARM FORCE** (LINK)

● **2023 | CONTACT MANAGEMENT SYSTEM USING C LANGUAGE** (LINK)

● **2022 | SECURITY SYSTEM FOR THE CLASSIFIED DOCUMENT ROOM** (LINK)

CERTIFICATIONS

● **University of Michigan**

- 2024 | C Programming for Everybody Specialization
- 2022 | Python for Everybody Specialization

● **2024 | Machine Learning Specialization, Stanford University**

● **2024 | ALTIUM Education PCB Basic Design Course**

● **University of Moratuwa**

- 2024 | Fundamentals of Digital System Design
- 2023 | System Verilog for ASIC/FPGA Design & Simulation,

EXTRA CURRICULAR ACTIVITIES

● **IEEE Student Branch of University of Peradeniya**
- 2024 - 2025 | Editorial Team Lead
- 2023 - 2024 | Vice Secretary, Executive Committee

● **2024 | Team Leader in Rotaract Club of University of Peradeniya**

● **2022 - 2024 | Member of University Basketball Crew**

● **School**
- 2018 | School House Captain in 2018
- 2013 – 2018 | Member of School Handball team - Captain of Under 16 team (2015)

ACHIEVEMENTS

- 2023 | Semifinalists at the BRAINSTORM'23
- 2023 | 2nd runners-up at ACES HACKATHON
- 2023 | Women's championship in Happening Iced Tea Basketball League
- 2015 | Merit Award for Handball

REFEREES

- Dr. Roshan Godaliyadda, Professor,
  Department of Electrical and Electronic Engineering,
  University of Peradeniya
  roshang@eng.pdn.ac.lk
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- Dr. Ruwan Ranaweera, Senior Lecturer,
  Department of Electrical and Electronic Engineering,
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