



# RUWANYA ABEYNAYAKE

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- [linkedin.com/in/ruwanya-abeynayake/](https://www.linkedin.com/in/ruwanya-abeynayake/)
- <https://github.com/RuwaAbey>
- [ruwaabey.github.io/my-portfolio/](https://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

## 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.

## SOFT SKILLS

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

## 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 ([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](#))

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## 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.](#)

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## 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)

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## 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

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## REFEREES

- Dr. Roshan Godaliyadda, Professor,  
Department of Electrical and Electronic Engineering,  
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- Dr. Ruwan Ranaweera, Senior Lecturer,  
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University of Peradeniya  
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