

Sandun Herath

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🌐 [LinkedIn](#) 🐙 [GitHub](#)

Profile

Passionate second year biomedical engineering undergraduate who is interested in digital signal processing, machine learning algorithms, modelling of physiological systems, neuroscience and love their applications to make an positive impact on the world.

Education

- **University of Moratuwa** **Moratuwa, Sri Lanka**
2022 -2026
BSc. Engineering (Hons.) in Biomedical Engineering, CGPA 3.83
 - Department of Electronic and Telecommunication Engineering
 - CGPA : 3.83/4.00 (Up to Semester 4)
 - Dean's List: Semester 1,2

Relevant Courses: Signals and Systems, Electronics, Control Systems, Physiological Modeling, Linear Algebra, DSA.

- **Central College Anuradhapura** **Anuradhapura, Sri Lanka**
2012 -2020
GCE Advanced Level - Physical Science Stream
 - Zscore: 2.6277 Ranked 86th in the country, 1st in the districtGCE Ordinary Level 9As

Projects

- **Restaurant Robot** 🐙 **2024**
 - Implementing a vision based navigating robot with the use of Kinectv2 camera ROS integration.
 - Use of gazebo for simulation and maintaining proper documentation.
 - Stabilization tray for proper carrying of food items.
- **Biosense-AI Deep Learning Based ECG Signal Classifier and Interpreter** 🐙 **2023**
 - Achieving low noise amplified ECG signal using analog components with designed PCBs.
 - SPO2 and Heart Rate measuring through sensors and processes using SBC.
 - Predicting and interpretation of possible health issues related to waveform with SBC.
- **Implementing a model for a fall detection device for elderly people** 🐙 **2023**
 - Develop algorithm to detect falls of adult individuals using MPU6050 gyroscope.
 - Send SMS to a given mobile number after detecting falls.
 - Altium and SOLIDWORKS for design and implementation of the prototype.
- **Saline Flow Controller** 🐙 **2023**
BM2210- Biomedical Design Project
 - Implementing a prototype design for the saline flow controller.
 - Maintaining proper documentation with the intension of applying a patent and FDA approval.
 - Design of PCB and enclosure for the prototype

Awards and Scholarships

- **Finalist — Brainstrom** 2024
Healthcare competition organized by the IEEE EMBS in University of Moratuwa
- **2nd Runners Up— Mecha** 2023
Organized by the Technical Society of Faculty of Medicine in University of Colombo
- **Mahapola Higher Educational Scholarship** 2021
For the performance in GCE AL examination
- **Dialog Merit Scholarship** 2021
For the performance in GCE AL examination

Online Courses & Certificates

- Computational Neuroscience (June. 2023) - [Coursera](#)
- Digital Signal Processing 1: Basic Concepts and Algorithms - [EPFL](#)
- Advanced Learning Algorithms - [DeepLearning.AI](#), [Coursera](#)
- Introduction to FPGA Design for Embedded Systems - [Coursera](#)
- Improving Deep Neural Networks (Jan. 2023) - [DeepLearning.AI](#), [Coursera](#)

Skills

- **Programming Languages:** Python, C++, MatLab
- **Familiarized Software:**
 - ROS, Arduino IDE, Altium Designer, SOLIDWORKS, MatLab Simulink, Quartus Prime, Vivado, Multisim, LTSpice
- **Soft Skills:** Problem Solving, Project Management, Adaptability, Analytical Thinking

Leadeship & Volunteering

IEEE Engineering in Medicine and Biology Society - University of Moratuwa

Committee Member

Gavel Club - University of Moratuwa

Member

Electronics Club - University of Moratuwa

Member