




# Weerasinghage Don Imasha Nethmal

Biomedical Engineering Undergraduate, University of Moratuwa

 [linkedin.com/in/imashanethmal](https://www.linkedin.com/in/imashanethmal)  [github.com/NethmalWDI](https://github.com/NethmalWDI)  [wdinethmal@gmail.com](mailto:wdinethmal@gmail.com)


## EDUCATION

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### University of Moratuwa, Sri Lanka

*B.Sc. Engineering(Hons) in Biomedical Engineering*

May 2022- present

GPA: 3.81/4.0 

### Ananda National College, Puttalam

*GCE Advanced Level (Mathematics, Physics, Chemistry)*

2012 - 2020

Ranked 225 out of 20000 students / z-score of 2.4271

### Area of interest:

Digital Signal Processing, Neuroscience, Machine learning, Modelling of Physiological Systems, Analog IC design

## PROJECTS

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### Analog computer design | *Analog circuit designing, Enclosure design*

2023

- Analog circuits that can perform addition/subtraction and four quadrant multiplication using op-amps.
- Altium and Solidworks designs for implementation of the prototype.

### Implementing a model of fall detection device, | *2nd semester project in university*

2023

- Team project to build a functional device using Altium and Solidworks software
- Develop an algorithm to detect falls of adult individuals using MPU6050 gyroscope by analyzing motions
- Send SMS to a given mobile number after detecting falls through MQTT server.

### RFID handheld reader | *HF antenna, circuit designing, Enclosure design*

june 2024

- Developed and tested a RFID system that can identify tags and update the real-time database.
- Custom PCBs and enclosure designs to adapt to requirements.

### Communication device for individuals with paralysis

2024

- Team project to develop a system that integrates EMG signals and ML
- Secured a spot in 10 semi-finalists among 50+ participants from universities all across the country in Brainstorm-2024 competition



### UART Transceiver Implementation in FPGA

2024

- Used Verilog hardware description language (HDL) to design.
- Physically implemented using DE0 nano board.

### Open-source analog Ic design basics

June 2024- present

- This includes the preparation for the IEEE UNIC-CASS competition.
- Final proposal to design low-power SAR ADC using open-source PDKs.
- CMOS inverter  CMOS ota 

## SKILLS

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**Programming Languages:** Python, C++, MATLAB

**Softwares:** Altium Designer, Solidworks, Quartus Prime, Multisim and Magic VLSI

**Libraries:** OpenCV, NumPy, Matplotlib

**Soft Skills:** Project management, Problem solving, Public speaking

## AWARDS AND SCHOLARSHIPS

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**Semi-finalist | Brainstorm 2024:** Healthcare Innovation Competition organized by the IEEE EMBS in University of Moratuwa

**Dean's List** (semester 1, semester 2)

**Mahapola Merit Scholarship:** Granted by the Government of Sri Lanka based on GCE A/L performance

## VOLUNTEER EXPERIENCE

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**Brainstorm 2024 - Sri Lanka's Premier Healthcare Innovation Competition** Sept. 2023 -Present  
Memeber-financial Committee: Involved in the fundraising and public marketing centered within the industry

**MEDx 2023/24 - Medical Technology ideathon** Aug. 2023 -Present  
Co-chair

- Engaging with industry experts.
- Team handling (40+ teams).
- Event management (3 online workshops, Grand finale)

**IEEE Engineering in Medicine and Biology Society - University of Moratuwa** 2023 – Present  
Active member

**Teaching volunteer** 2023  
• Soyuru Sathkara Project, University of Moratuwa

## REFERENCES

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**Dr. Chamira U. S. Edussooriya**

BSc Eng (Moratuwa), MAsC (UVic), PhD (UVic), MIEEE

Senior Lecturer

Department of Electronic and Telecommunication Engineering

University of Moratuwa

✉ chamira@uom.lk