Sanugi Dilara Wickramasinghe

wickramasinghesd.22@uom.lk +94 71 654 2724 sanugiwickramasinghe Sanugiw

No. 60/5, Kanda Pahala, Hiththetaiya Middle, Matara, Sri Lanka

Summary

Motivated Biomedical Engineering undergraduate with a strong foundation in medical instrumentation, biosignal processing, and machine learning. Skilled in problem-solving, teamwork, and communication, with a passion for innovation and applying engineering to improve healthcare outcomes.

Education

University of Moratuwa *March 2023 – Present*

B.Sc. Engineering Honors in Biomedical Engineering

Department of Electronic and Telecommunication Engineering

- CGPA: 3.87/4.0
- **Relevant Coursework:** Anatomy and Physiology for Engineers, Modeling and Analysis of Physiological Systems, Biomedical Device Design, Signals and Systems, Digital Signal Processing, Pattern Recognition, Data Structures and Algorithms, Differential Equations, Numerical Methods, Linear Algebra, Graph Theory

Sujatha Vidyalaya, Matara *2008 - 2022*

- GCE Advanced Level - 3 As for Combined Mathematics, Physics, and Chemistry - Z score of 2.5903

Projects

PPG Atrial Fibrillation Classifier *PPG-Classifier* September 2025

- Trained an LSTM-based deep learning model for atrial fibrillation detection using MATLAB for advanced PPG signal processing.
- Built a Streamlit web application for real-time prediction and visualization.

ML Integrated Table Mounted Fundoscope *Table-Mounted-Funduscope* December 2024

- Designed a stationary retinal imaging device using SolidWorks that minimizes motion artifacts for clearer image capture.
- Implemented a CNN algorithm to predict diabetic retinopathy levels from the captured retinal images.

X-Hale - Smart, Portable Spirometer *X-Hale* August 2024

- Developed a smart, portable spirometer using Arduino for real-time lung function monitoring.
- Created a mobile application in Flutter for data visualization and user interaction.

Dual Mode Analog Thermometer *Dual-Mode-Thermometer* December 2024

- Developed a dual-mode thermometer using only analog components to measure two temperature ranges, with the enclosure designed in SolidWorks and circuitry simulated in LTspice.
- Programmed the real-time display using Arduino.

Smart Trash Classifier *Trash-Classifier* March 2025

- Developed a Raspberry Pi-powered automatic trash classifier using TensorFlow and OpenCV to identify recyclables (plastic, paper, metal, glass) in real-time.
- Built a local web interface with Flask for live visualization and interaction.

MediBox - Smart Medicine Reminder System *Medi-Box* March 2025

- Developed an ESP32-based smart medicine reminder system to monitor environmental conditions and ensure safe medication storage using Wokwi Simulator.
- Implemented intake reminders via a Node.js interface for real-time monitoring and notifications.

Handheld HF RFID Reader *Handheld-RFID-Reader* July 2025

- Developed a handheld HF RFID reader with real-time database integration for efficient tag tracking.
- Contributed to microcontroller programming at the register level using Microchip Studio.

Certifications

Supervised Machine Learning: Regression and Classification Completed December 2024
DeepLearning.AI, Stanford University

Technical Skills

Languages: Python, C++, Dart, MATLAB
Frameworks: TensorFlow, NumPy, Flutter, OpenCV
Software: SolidWorks, Altium Designer, LT Spice, Proteus, Quartus
Documentation: Latex, Microsoft Office Suite, Canva
Other: Git, GitHub, Arduino

Social Engagements

IEEE EMBS UoM January 2024 - Present
- Head of External Relations - Term 24.25
- Delegates and PR Committee Lead - Brainstorm 2025

AIESEC in UoM March 2023 - July 2024
- iGV Matching Panelist - March 2023 - July 2023
- iGV Team Leader - Project Global Classroom 1.2
- Organizing Committee Member for Delegates - Overhaul 2.0

Electronic Club January 2024 - Present
- External Relations Committee Member - Term 24.25
- Company Coordinator and Committee Member for Delegates - SLRC 2024

IEEE SB UoM November 2023 - Present
- Editorial Committee Member - Term 24.25
- Organizing Committee Member - MERCon 2023, 2024, Mora Foresight 2.0, Rise Up Mora 2024, 2025

Honors and Awards

Dean's list placement (Semesters 1,2,3 and 4) - Faculty of Engineering, University of Moratuwa	2023,2024,2025
Best performing matching panelist - iGV, AIESEC in UoM	2023
Team leader of the most impactful iGV project of AIESEC in Colombo South	2023

References

Dr. Pranjeevan Kulasingham
BSc Eng (Moratuwa), PhD (Maryland)
Senior Lecturer
Dept. of Electronic and Telecommunication Engineering
University of Moratuwa
E-mail: pranjeevank@uom.lk

Dr. Chamira U. S. Edussooriya
BSc Eng (Moratuwa), MASc (UVic), PhD (UVic), MIEEE
Senior Lecturer
Department of Electronic and Telecommunication Engineering
University of Moratuwa
Email: chamira@uom.lk
Mobile: +94 71 165 6562