Isiri Amani Withanawasam

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Summary

I am a third-year undergraduate studying Biomedical Engineering at the University of Moratuwa. I am a hardworking and dedicated individual, ready to apply my knowledge to solve real-world challenges in order to advance the healthcare industry.

Interests : Medical Imaging, Bio Signal Processing

Education

University of Moratuwa — Moratuwa, Sri Lanka
B.Sc. in Biomedical Engineering; ***CGPA: 3.84/4.00*** — *May 2022 – Present*

Devi Balika Vidyalaya — Colombo 08, Sri Lanka
G.C.E Advanced Level; ***Combined Mathematics-A Physics-A Chemistry-A*** — *August 2020*

Samudradevi Balika Vidyalaya — Nugegoda, Sri Lanka
G.C.E Ordinary Level; ***9As*** — *December 2017*

Projects

Optimizing 12 Lead ECG Classification using VGGNet and ResNet | *GitHub* — April 2024 - Present

- This project is an ongoing project for the George B Moody Physionet Challenge - Official Phase. The task is to classify ECGs into different classes using the images that built from the signals. The abstract that our team submitted was accepted for the CINC Conference 2024 and we will be doing the poster presentation at the conference this year.

Early Diabetic Foot Ulcer Detection using Thermograms | *GitHub* — June 2024 - July 2024

- Multiclass classification model built for identify five classes of DFU based on severity.This is a part of a project which is a portal device where patients can chech for the diabetic foot ulcers and help them to detect DFUs in early stage.

Computer Vision Based Bin Picking Robot | *GitHub* — February 2024 - June 2024

- This project was done as a partial requirement for the Module EN2853-Electronic Design Realization in Semester 4. We used computer vision algorithm to detect boxes and a gripper mechanism to pick up the box. We mainly focused on developing the algorithm.

Smart Medibox | *GitHub* — February 2024 - April 2024

- This project was done for the Module EN2853 - Intorduction to Embedded Systems in Semester 4. Smart Medibox uses an ESP32 to remind users to take their medicine on time.

Automated Saline Pump | *GitHub* — August 2023 - October 2023

- This project was completed as a partial requirement for the module Biomedical Device Designing module in Semester 3. Our team implementated an Automated Saline Pump System named FlowGuard and created a software for remote patient management.

Analog ECG Heart Monitor | *GitHub* — July 2023 - October 2023

- This project was done as a partial reuqirement for the module Laboratory Practice and Projects in Semester 3. We designed an ECG Monitor only using analog components.

Measure Up | *GitHub* — March 2023 - June 2023

- This project was done for the module Electronic Design Project in Semester 2.This electronic height-measuring device is a portable and user-friendly device that allows patients to measure their height accurately and independently.The project has obtained a grant from the University Business Linkage Cell to further development for the market.

Professional Experience

RoboticGen Academy May 2023 - Present

I work as a mentor and a content creator at RoboticGen Academy which a revolutionary STEM Academy for K-12 kids to study engineering tech related fields while getting personalised mentoring from tutors.

Achievements

Abstract acception for the CINC Conference 2024 : George B Moody Physionet Challenge 2024 June 2024

Dean's List Placement in semsters 1 and 2 : Faculty of Engineering University of Moratuwa December 2023

Spirit of Service Award : Rotaract Club of University of Moratuwa May 2023

Volunteering

IEEE EMBS Student Branch Chapter of University of Moratuwa May 2023 - Present

Brainstorm '24 - Editorial Lead
Social Media Manager

Rotaract Club of University Of Moratuwa June 2022 - May 2023

Inducted Member
Moderator
Organizing Committee member - MentHer

Technical Skills

Languages: Python, MATLAB , C++, Javascript

Frameworks: Tensorflow, Pytorch, NumPy, Scikit-learn

Unity Engine: Altium Designer, Solidworks

Markup: Latex

Tools: Git, Github