DINITH HERATH

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PERSONAL MISSION STATEMENT

A third-year engineering undergraduate who is passionate about mastering new technologies and has a keen interest on applying them to solve challenging problems in our everyday life. I portrait myself as a fast and curios learner who tries to learn new things.

RESEARCH INTERESTS

Internet of Things(IoT), Machine learning, Robotics & Automation, Data Science, Deep Learning

EDUCATION

University of Moratuwa, Sri Lanka *September 2017 - Present*
B.Sc. Eng (Hons.) in Electronic & Telecommunication Engineering
Currently studies in Semester 5 Year 3

- **Semester 1: Dean's List (SGPA: 4.00)**
- **Semester 2: SGPA: 3.63**
- **Semester 3: Dean's List (SGPA: 3.88)** **Overall GPA: 3.83/4.2**

Modules undertaken:
Internet of Things Design and Competition, Robot Design and Competition, Graph Theory, Introduction to Telecommunication, Fundamentals of Computer Organization & Design, Analog and Digital Communications, Differential Equations, Linear Algebra, Random Signals and Processes

Ananda College, Colombo 10, Sri Lanka *2014 - 2016*
G.C.E. Advanced Level in Mathematics, Physics and Chemistry 2016 (University Entrance)
- 3 A (High Distinction) passes

D.S.Senanayake College, Colombo 07, Sri Lanka *2003 - 2013*
G.C.E. Ordinary Level (Junior High School)
- 9 A (High Distinction) passes

EXPERIENCE

Team CircuitBreakers *December 2017 - Present*
Founder & VP of Product (StartUp)

A team of 9 individuals passionate about robotics, IoT etc. Here I learned to complete projects with in a given time, manage and collaborate with team members to focus everyone to achieve team's vision.

British Council *September 2016 - April 2017*
Member

In here I learned how to convey my messages to audience effectively and developed listening and speaking skills. I was able to successfully complete Upper-Intermediate Level I and II.

PROJECTS

Predicting diseases using Iris Scanning (**Ongoing** - 3 members)
This project aims at designing app to scan the Iris of the eye and predict diseases such as diabetes, cholesterol etc. by analyzing different features of Iris.
Using OpenCV, Machine Learning, Flutter, GCP, Azure

Portable Air Quality Detector - Pollutector (**Ongoing** - 3 members)
Pollutector is a portable device which is designed to measure temperature, air quality, humidity, particle value and display in an native app which is available in both IOS and Android. Machine learning models are implemented on GCP to predict future values in each category.
Using Arduino, NodeMCU, MQTT, Flutter, Firebase, BigQuery, Machine Learning

WiFi Analyzer (**Completed** - 3 members)
A WiFi analyzer which is capable of detecting the location (predefined) of user based on a machine learning model trained on RSSI values of predefined locations.
Using Arduino, NodeMCU, Python, Scikit Learn (Link | **Github**, **Github**)

Micromouse Robot (**Completed** - 5 members)
Micromouse robot which navigates to the center of the maze and calculates the shortest path to achieve its fast run using curve turns.
Using STM, Arduino, C++, Altium, Solidworks

Designing Autonomous Robots (**Completed** - 5 members)
Designed **7 different autonomous robots** for local competitions. Robots for line following, wall following, maze solving, color line following, shooting ping-pong balls, detecting coins, water collecting and block moving.

Auto Tuning Amplifier (**Completed** - 4 members)
A Class D audio amplifier which is capable of tuning basic audio features such as base, treble, volume etc. by aid of a python program.
Using LTSpice, Proteus Simulation, Altium, Python

Constant Current Source (**Completed** - 4 members)
Constant current source which can supply 1A constant current to charge a typical 12V lead acid battery with a feedback loop for the battery voltage.

CERTIFICATES

- **Industrial IoT on Google Cloud Platform (Coursera)** (View Certificate)
- **An Introduction to Programming the Internet of Things (IoT) Specialization (Coursera)**
  - **Introduction to the Internet of Things and Embedded Systems** (View Certificate)
  - **Interfacing with the Arduino** (View Certificate)
  - **The Arduino Platform and C Programming** (View Certificate)
  - **Raspberry Pi Platform and Python Programming for the Raspberry Pi** (Ongoing)
  - **Interfacing with the Raspberry Pi** (Ongoing)
  - **Programming for the Internet of Things Project** (Ongoing)

- **Starting with Altium Designer (Udemy)** (View Certificate)
- **Hands-On Python & R In Data Science (Udemy)** (Ongoing)
- **Hands-On Artificial Neural Networks (Udemy)** (Ongoing)

COMPETITION AWARDS

Robotics

Finalist at SLRC 2018	*Sri Lanka*
Two times consecutive finalist at SLIIT Robofest 2018,2019	*Sri Lanka*
Participated in Xbotix 2018	*Sri Lanka*
2^{nd} Runners-Up at SLRC 2017	*Sri Lanka*

Programming

$11th$ place in Country in iEEEXtreme11.0	*International*

HONORS & AWARDS

Higher Distinction at Sri Lankan Physics Olympiad Competition 2016
Higher Distinction at Sri Lankan Physics Olympiad Competition 2017
Diploma in English at Acquinas University College 2014

TECHNICAL STRENGTHS

Languages	Sinhala (Native), English
Computer Languages	C++, Python, MATLAB, Dart, HTML, CSS, LaTeX
Designer Software	Altium, Solidworks, NI Multisim, Proteus Simulation
Robot Programming	Arduino, Python, Atmel Studio
Tools	VS Code, GitKraken
Operating Systems	Windows, Ubuntu, Debian OS
Online Platforms	GCP, Azure

EXTRA-CURRICULAR

Mobile Photography and Travelling
Badminton Player
Member of E-Club of Electronic and Telecommunication Department

NON RELATED REFREES