THAMISH WANDURAGALA

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ABOUT ME

I am a motivated final year computer engineering undergraduate, interested in all aspects of product development involving software, hardware and machine learning. Presently, I am actively pursuing career opportunities which utilizes innovative problem-solving approaches where I would be able to make meaningful contributions.

EDUCATION

University of Peradeniya **2019 November - Present**

- Bachelor of the Science of Engineering Honours in Computer Engineering GPA: 3.95/4.0

Trinity College, Kandy **(2004 - 2018)**

- G.C.E. Advanced Level (2018) - 2As, 1B in Physical Science Stream.
- G.C.E. Ordinary Level (2015) - 8As, 1B (English Literature)

EXPERIENCE

Visiting Research Assistant **2023 August - 2024 January**

- Supervised by Prof. Yuen Chau at Engineering Product Development Pillar, Singapore University of Technology and Design (SUTD).
- Contributed to a 6G Research and Development Project based on developing Wireless Communication Devices in collaboration with Nanyang Technological University (NTU).

Teaching Assistant **2022 October - Present**

- Supervised weekly sessions for 2nd, 3rd year undergraduates of Department of Computer Engineering, University of Peradeniya for course modules,
  * Operating Systems, Signal Processing, Programming Methodology (Based on C Programming Language), Digital Design (Based on circuit building.)

Voluntary **2020 May - Present**

- Project Nenathambara

  Contributed to making a new syllabus for Python programming language beginners and delivered the content to students in schools in Sri Lanka.

PROJECTS

Neuromorphic Architecture for Spiking Neural Networks *(Group)* | *Verilog* **2023 December - Present**

- A neuromorphic accelerator architecture that is optimised to run smaller scale Spiking Neural Networks (SNNs), using a network of nodes optimised for high speeds and low power consumption.
- Contributed to making the architeture and testing its performance.

Automated Road-Rule Detector *(Group)* | *Python, Flutter, Firebase, Nodejs* **2022 October - 2023 January**

- A hardware device based on raspberry pi 3 as the microprocessor which is able to detect road rule breaking severity with an app to visualize collected data.
- Contributed to the Front-End and Hardware.

2-bit Intelligent Reflective Surface Prototype *(Group)* | *Python, Matlab* **2023 August - 2024 January**

- A 6G Wireless Communication research project focused on researching about Intelligent Reflective Surfaces (IRS).
- Contributed to making the controller of the IRS.

ML-based Patient Diagnosis/Care *(Group)* | *Python, Nodejs, Flutter* **2023 May - Present**

- An app designed to get symptoms from a user and provide insights and suggestions on potential risks, recommended eating habits and recommendations on type of medical doctor to visit.
- Contributed to the Machine Learning model and the Back-End.

Student Results Management System *(Group)* | *Java, Android Studio* **2021 November - 2022 March**

- An application developed for undergraduates to keep track of their academic performance, progress.
- Contributed to the Back-End of the system.

Smart Inventory Management System *(Group)* | *Laravel with php, blade, MYSQL* **2022 May - August**

- Introduced a resource scheduling system to manage resources in the MakerSpace Lab (Department of Computer Engineering, University of Peradeniya).

8-bit Single Cycle Processor *(Group)* | *Verilog* **2021 November - 2022 March**

- An 8- bit single cycle processor with an ALU, register file, control logic, data memory, data cache, instruction memory and instruction cache. A memory hierarchy too was built.

Database System at University Gymnasium *(Group)* | *MySQL, Php* **2021 November - 2022 March**

- A fully functional database to organize reservations, cancellations, borrowings and misplacements of equipment at a gym.

Inventory Management System for several companies *(Individual)* | *C#, Java* **2020 August**

- Introduced a complete Inventory Management System for business entities through project opportunities at ESOFT, Kandy.

LEADERSHIP / EXTRACURRICULAR

Offices Held

- President, Ceylon University Dramatic Society, University of Peradeniya. (2022-2023)
- Secretary, Aviation Society, Trinity College, Kandy. (2017-2018)

Aces Hackathon 2023 *(Group)* **June 2023**

- 2nd place in "Other" category - Two day competition with 40+ participating teams.

Global Robotics Games *(Group)* **November 2023**

- 1st place in University Category - Three day competition based on developing robotic controllers for Transformer Robot Soccer League.

Aces Pre-Coders 2022 *(Group)* **August 2021**

- Finalists - A 6 hour coding competition with 70+ participating teams.

Sports

- Baseball U19, U17, U15, U13 - Trintiy College, Kandy. (2011 - 2017)

SKILLS

Programming Languages: Python, Java, C, C#, Dart

Hardware Programming: Verilog, ARM Assembly

Mobile Development: Flutter, Native Android

Front End: HTML/CSS, Bootstrap

Back End: Spring Boot, Nodejs

Data Modeling:Numpy, Pandas, scipy, sklearn

Databases: MySQL, FireBase

Version Controlling: Git

REFEREES

Dr. Asitha Bandaranayake |**asithab@eng.pdn.ac.lk**

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