

# THAMISH WANDURAGALA

Department of Computer Engineering, University of Peradeniya, Sri Lanka.

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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

<b>University of Peradeniya</b>	<b>2019 November - Present</b>
• Bachelor of the Science of Engineering Honours in Computer Engineering	GPA: 3.95/4.0
<b>Trinity College, Kandy</b>	<b>(2004 - 2018)</b>
• G.C.E. Advanced Level (2018) - 2As, 1B in Physical Science Stream.	
• G.C.E. Ordinary Level (2015) - 8As, 1B (English Literature)	

## EXPERIENCE

<b>Visiting Research Assistant</b>	<b>2023 August - 2024 January</b>
• 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).	
<b>Teaching Assistant</b>	<b>2022 October - Present</b>
• 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.)	
<b>Voluntary</b>	<b>2020 May - Present</b>
• 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

<b>Neuromorphic Architecture for Spiking Neural Networks (Group)   Verilog</b>	<b>2023 December - Present</b>
• 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 architecture and testing its performance.	
<b>Automated Road-Rule Detector (Group)   Python, Flutter, Firebase, Nodejs</b>	<b>2022 October - 2023 January</b>
• 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.	
<b>2-bit Intelligent Reflective Surface Prototype (Group)   Python, Matlab</b>	<b>2023 August - 2024 January</b>
• 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 ESOF, Kandy.

## **LEADERSHIP / EXTRACURRICULAR**

### **Offices Held**

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

### **Sports**

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

### **Aces Hackathon 2023 (Group)**

**June 2023**

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

### **Global Robotics Games (Group)**

**Septmeber 2023**

- 1st place in University Category - Three day competition in the Transformer Robot Soccer League.

### **Aces Pre-Coders 2022 (Group)**

**August 2021**

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

## **REFEREES**

**Dr. Asitha Bandaranayake** | [asithab@eng.pdn.ac.lk](mailto:asithab@eng.pdn.ac.lk) **Dr. Isuru Nawinne** | [isurunawinne@eng.pdn.ac.lk](mailto:isurunawinne@eng.pdn.ac.lk)

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## **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