

Praveen Dhananjaya

Portfolio: <https://sites.google.com/view/praveen-dhananjaya>

Email: e16081@eng.pdn.ac.lk | phone: +94 0778094061

GitHub: <https://github.com/praveendhananjaya>

EDUCATION

BSC(ENG) COMPUTER ENGINEERING | UNIVERSITY OF PERADENIYA SRI LANAKA

Present – Oct 2022 | Faculty of Engineering

- 3rd-year undergraduate
- Current GPA : 3.40 / 4.00

GCE | ADVANCED LEVEL

2016

- Maths - A , Physics - B , Chemistry - B
- z-core 1.83
- 1206 from 30000+ participants nationwide

GCE | ORDINAL LEVEL

2013

- 6A pass and 2B pass

PROJECTS

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SMART WAREHOUSE MANAGEMENT SYSTEM 2021

Developing automated warehouse handle by AGV and Robot arm so this system is capable of handle loading/unloading of goods. Increased warehouse efficiency and performance multiple times compared to classical warehouses.

- Technologies : circuit design, AVR C and Arduino, multitasking(real-time scheduling) and interrupt, active filters, encryption schemes, Mysql, mqtt, AWS server
- <https://github.com/cepdnacl/e16-3yp-smart-pharmaceutical-warehousing>

8-BIT SINGLE-CYCLE CPU 2020

8-bit single-cycle CPU based on Harvard architecture which uses a 32-bit instruction word. This implementation was improved using pipelining mechanisms and it gained around 4-time performance improvement. instruction and data caches and memories were implemented as a memory hierarchy to achieve high-performance

- Technologies : Verilog, Harvard architecture, pipelining mechanisms , memory hierarchy, custom assembler
- github: <https://github.com/praveendhananjaya/CPU-8-bit-FPGA->

8 BIT COMPUTER SAP-1 2020

It was a common bus architecture (SAP-1) computer. It can compute simple algorithms. For this implementation, I designed and developed a custom PCB and microinstruction set.

- Technologies : VSAP-1 architecture, circuit design, custom assembler
- github: <https://github.com/praveendhananjaya/CPU-8-bit-common-bus>

HOSPITAL MANAGEMENT SYSTEM 2020

Web application with Database for hospital patient and medicine management in order to billing and patient data

- Technologies : MySQL, HTML, PHP
- github: <https://github.com/praveendhananjaya/hospital-managment-system>

FRACTAL VISUALIZER 2020

JAVA OOP base multithreading programme.

- Technologies : Java OOP, Witch is accelerated by tiled base multi threading
- github: <https://github.com/praveendhananjaya/Fractals>

SURVEILLANCE CAMERA SYSTEM 2020

Suspicious activity tracking. ex:- Face covers , Abandoned packages , suspicious object , unauthorized people

- Technologies : python , tensor-flow

MICRO-MOUSE 2019

develop a robot that can approach the destination of a maze

- Technologies : custom PCB, Arduino and C flood fill algorithm A* algorithm, active filters, superloop programming architecture
- github: <https://github.com/praveendhananjaya/micro-mouse>

LANDSLIDE MONITORING SYSTEM 2018

landslide monitoring system , low cost landslid detection and alarming system

- Technologies : flexible piezoelectric sensor and single analyse, active filters, UDP communication using WiFi network superloop programming architecture

RELEVANT COURSEWORK

HARDWARE SUBJECT

- Computer Architecture, Digital Design, Embedded Systems, Signal Processing, Computer Systems Engineering: Industrial Networks, Electronics I ,Electronics II | university course
- Circuit Design

PROGRAMMING

- software construction, Data Structures and Algorithms, programming methodology, Software Engineering | university course
- Verilog , C++ , Arm , ARM assembly, Java, Python , Arduino

ARTIFICIAL INTELLIGENCE

- Neural Networks and Fuzzy Systems, Machine Learning and Data Mining | university course
- Neural Networks and Deep Learning | Coursera Deeplearning.AI

OTHER SUBJECT

- Operating Systems, Computer and Network Security | university course

TECHNICAL SKILLS

PROGRAMMING LANGUAGES | C , C++ , JAVA , PYTHON

HARDWARE PROGRAMMING | VERILOG , ARDUINO , AVR C , PIC , ARM ASSEMBLY

PCB DESIGN | ALTIVM , EAGLE , EASYEDA

3D MODELING | FUSION 360 , SOLIDWORKS

DATABASE | MYSQL

CERTIFICATES AND COMPETITIONS

ACES CODERS 4ST PLACE| 2020

12-hour algorithmic coding nationwide competition,nationwide competition over 150+ teams

SLIIT MICROMOUSE 3RD PLACE| 2019

14x14 Maze solving robot competition.Using small robot, nationwide competition over 100+ teams

ACES HACKATHON 1ST PLACE| 2019

Surveillance camera system Suspicious activity monitoring system, competition over 60+ teams

MORA XTREME 1ST PLACE| 2019

12-hour algorithmic coding nationwide competition,nationwide competition over 100+ teams

JAFFNA CODERS 1ST PLACE| 2019

12-hour algorithmic coding nationwide competition,nationwide competition over 80+ teams

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12-hour algorithmic coding nationwide competition,nationwide competition over 80+ teams

ACES HACKATHON 1ST PLACE| 2018

Surveillance camera system landslide monitoring system , low cost landslid detection and alarming system, competition over 60+ teams