Praveen Dhananjaya

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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

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 | Altium , eagle , easyeda

3D MODELING | Fusion 360 , solidworks

DATABASE | MySQL

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/cepdnaclk/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
andslide 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

CERTIFICATES AND COMPETITIONS

ACES CODERS 4ST PLACE| 2020
12-hour algorithmic coding nationwide competition,nationwide competition over 150+ teams

SLIIT MICROMOUSE 3RD PLACE| 2019
14×14 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 4.0 1ST PLACE| 2019
12-hour algorithmic coding nationwide competition,nationwide competition over 100+ teams

JAFFNA CODERS 4TH PLACE| 2019
12-hour algorithmic coding nationwide competition,nationwide competition over 80+ teams

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

MORA XTREME 3.0 PARTICIPATION| 2019
12-hour algorithmic coding nationwide competition,nationwide competition over 100+ teams

ACES HACKATHON 1ST PLACE| 2018
Surveillance camera system landslide monitoring system , low cost landslid detection and alarming system, competition over 60+ teams