






BUDDHI PERERA

Computer Engineering Undergraduate
Faculty of Engineering
University of Peradeniya

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INTERESTS

- Computer Architecture
- Embedded Systems
- Operating Systems
- Computer Networking and Security
- Devops and System Administration
- Full-stack Development

EDUCATION

Bachelor of Science of Engineering

2017 Nov – Present

GPA: 3.9/4.0

University of Peradeniya

Specializing in Computer Engineering

G. C. E. Advanced Level

Trinity College, Kandy

2016

TECHNICAL SKILLS

Hardware programming

Verilog HDL, Arduino

Procedural programming

ARM Assembly

Programming languages

C, Java, JavaScript, Python

Application development

HTML, CSS, ReactJS, Bootstrap, NodeJS, ExpressJS

Database

MySQL, MongoDB

Operating systems

Linux (Bash shell), Windows

Version control

git

3D Modeling

Fusion360, AutoCAD

Numerical computing packages

MATLAB

Circuit design and simulation

Proteus, EasyEDA

Computational Mathematics

Numerical methods, Discrete mathematics, Statistics and Probability

PROJECTS <https://github.com/buddhiheshan>

RISC – V Pipeline Implementation Group Project

2021 – Present

Design and implementation of RV32IM pipeline processor according to the RISC – V ISA with a memory hierarchy including caching and main memory using behavioral..

Technologies : Verilog HDL

Contribution : Designing the data-path, Implementation of the processor

WaiterBot System Group Project

2020 - Present

A system of waiter robots and a smart ordering system for a restaurant. WaiterBot system contains waiter robots for delivery, mobile application for placing orders, web application and desktop application for management of the restaurant.

Technologies : Arduino with ESP32, ReactJS, MQTT, ElectronJS, Fusion360

Contribution : Hardware design and implementation, Web and desktop applications

Single Cycle CPU Individual Project

2020

Design and implementation of a 8-bit single cycle CPU to support a custom ISA with a memory hierarchy including caching and main memory using behavioral.

Technologies : Verilog HDL

Contribution : Designing the data-path, Implementation of the processor

Key Management System Group Project

2019

A system to manage key lending process in an organization.

Technologies : MySQL

Contribution : Database design

Compost Quality Manager *Group Project*
A real-time compost quality monitoring system.
Technologies : Arduino, MQTT
Contribution : Hardware implementation

2019

MINI PROJECTS

Fractals : Multi-threaded application for fractal visualization using JAVA 2020
Auction Server : Multi-threaded socket server for stock auctions using JAVA 2020
8-bit ALU : Gate level design and implementation of a simple ALU 2019
Pathfinder : Line following robot using basic electronic components 2018
Memory game : A simple memory game using Arduino 2018

CERTIFICATIONS, COURSES AND TRAINING PROGRAMS

Training program on Linux system administration and devops engineering Ongoing
• Offered by : WSO2
Full-stack web development with React Specialization
• Offered by : Coursera | The Hong Kong University of Science and Technology
Fundamentals of Computer Networking and Security Specialization
• Offered by : Coursera | University of Colorado Systems
Introduction to Git and GitHub
• Offered by : Coursera | Google

EXPERIENCE

Volunteer Instructor (Teaching Assistant)
Department of Computer Engineering, University of Peradeniya
• Computer communication Networks 2021 June - Present
• Computer Architecture 2020 - 2021

ACHIEVEMENTS AND COMPETITIONS

ACES Hackathon *Group Project* 2019
Winner in the Agriculture and Irrigation Category
Project : Compost Quality Manager

EXTRA-CURRICULAR ACTIVITIES

Rotaract Club of Katugastota Region
• Vice-president 2021 - Present
• Treasurer 2020 - 2021
National School Games Colors for Athletics
Trinity College Colors for Athletics
School Officer at Trinity College Kandy 2015-2016

REFEREES

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