# Sashini Liynage

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github.com/SashiniLiyanage

# **EDUCATION**

University of Peradeniya

Nov. 2018 – present

3rd year undergraduate in Computer Engineering (BSc. Engineering(Hons.))

cGPA: 4.00/4.00

Pushpadana Girls College, Kandy

2015 - 2017

G.C.E Advanced Level Examination

Provincial Rank - 5

Physics(A), Chemistry(A), Combine Mathematics(A)

National Rank - 80

# TECHNICAL SKILLS

Programming Languages:

Python, Javascript, Java, C

Web Developing:

Graphics Editing:

HTML5, CSS, Bootstrap, ReactJS, ElectonJS, NPM

Database Systems:

MongoDB

Hardware Programming:

Verilog HDL, ARM assembly

Adobe Illustrator, OpenCV

# RELEVANT COURSEWORK

Software Construction

Database Systems

Software Engineering

Electronics

Image Processing

Compilers

Computer Architecture

Digital Design

Machine Learning

Signal Processing

Communication Network

Operating Systems

#### PROJECTS

Remote Proctoring Device — repository — project page

July 2021 - Dec 2021

A single device which integrates the hardware and software components needed to conduct an examination in online mode with no technical interruption.

Technologies:

ReactJS, ElectronJs, Nodejs, MongoDB, Rest API, AWS

Contribution:

Desktop app development, Hardware design

Oral Cavity Region Detection System — repository — project page

January 2022 - present

A web-based tool to segment the known normal regions of the oral cavity. Sub project of oral cancer detection

Technologies:

ReactJS, Nodejs, MongoDB, Rest API, Keras, Tensorflow, Tensorflow.js

Contribution:

Web app development, Backend development

Reconstructing highly degraded license plates — colab — project report

2022

A procedure to extract a number plate from an image and reduce several noises due to low resolution, high or low lighting, and motion blur to reconstruct highly degraded images of license plates.

Technologies:

Python, OpenCV, EasyOCR

Techniques:

Spatial and Frequency domain filtering and Degradation modeling

# Compiler for COOL — repository

2022

Implement a lexical analyzer, parser, semantic analyzer, and code generator to compile programs written in the COOL: Classroom Object-Oriented Language.

Technologies:

C++

Techniques:

Abstract Syntax Trees, Flex and Bison, MIPS assembly.

# **8-bit single cycle processor** — repository

2021

Implement a simple 8-bit single-cycle processor which includes an CPU with data memory unit and data cache using Verilog HDL

Technologies: Verilog-HDL

# Multi-threaded chat server — repository

2022

A chat server that will accept connections from clients and would let clients send in strings over the network using multi-threads in Java.

Technologies: Java

Techniques: Multi-threading, Synchronization Primitives

#### ACHIEVEMENTS

Hacktitude 2022

An inter-university hackathon organized by the company 99x

Rank - 32 (Out of 200+ teams)

Hackfest 2022

An inter-university hackathon organized by the University of Peradeniya

Rank – 1 (Healthcare category) (Out of top 20 teams)

# TEACHING EXPERIENCE

Casual instructor Nov 2021 - March 2022

CO224 Computer Architecture - Department of Computer Engineering

# Volunteer teacher - Nanathambara 2022

March 2022

Webinar series on Arduino and python programming for school students organized by ACES University of Peradeniya

# EXTRACURRICULAR

# Member of the Rotaract club of university of Peradeniya

2019 - present

Project NextStep360 organizing committee member

Digital Media team member

Member of Design Team of Department of Computer Engineering

 ${\rm Dec}~2021$  -  ${\rm present}$ 

Member of the Dramatic Society of the University of Peradeniya

Dec 2019 - present

# REFERENCES