

ISURI DEVINDI

Department of Computer Engineering, University of Peradeniya, Sri Lanka

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ABOUT ME

I am a 3rd year computer engineering undergraduate, interested in **all phases of** software development from UI/UX designing to database management, and also **computer vision** and **machine learning**. I am currently seeking internship opportunities to enhance my skills.

EDUCATION

University of Peradeniya 2018 Nov - Present

BSc.Eng(Hons.) in Computer Engineering Field Rank - 1/60, Batch Rank - 1/415

GPA - 4.00/ 4.00

Hillwood College, Kandy 2004 - 2017

G.C.E. Advanced Level Examination District Rank - 6, National Rank - 113

Z-Score: 2.2768

CIMA Certificate level completion 2018

Fit-in-Deutsch 2 2014

Passed with 73 marks (out of 80)

ACHIEVEMENTS

IEEEXtreme 14.0

2020

24 hour global algorithmic programming competition Country Rank - 68, Global Rank - 724 (Out of 2000+ teams)

Hacktitude 2022

Inter-university hackathon organized by 99x

Rank - 32 (Out of 200+ teams)

Hackfest 2022

Inter-university hackathon organized by ACES,

University of Peradeniya

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

Hackdown 2019

Inter-university coding competition organized by IEEE WIE Student branch of University of Moratuwa

Rank - 37 (Out of 100+ teams)

PROJECTS

Oral cavity region detection system | Group |



2022 - Present

- A web-based application that can be used to upload images of an oral cavity and segment the anatomical structures present in the image using a machine learning model.
- Contribution: Exploring the potential of U-Net and Mask R-CNN models in developing a machine learning solution to segment the oral cavity images.
- Technology: TensorFlow, Keras, React.js, Express.js, MongoDB, Node.js
- Techniques: U-Net, Mask R-CNN

Reconstructing highly degraded license plates | Group |







2022

- Demonstration of the efficacy of traditional image processing techniques to reconstruct highly degraded images of license plates obtained from CCTV footage, when the source of degradation is unknown.
- Technology: Python, OpenCV, EasyOCR
- Techniques: Otsu thresholding, Morphological transformation, Contouring, Spatial and Frequency domain filtering and Degradation modeling.

Remote proctoring system | Group |







2021 - Present

- · A single device with video streaming facility which integrates the hardware and software components needed to conduct virtual proctoring of an examination in a university.
- Contribution: Designing a scalable web application for administrators of the university and proctors of examinations. Developing the hardware solution for the device using Raspberry Pi micro-controller.
- Technology: React.js, Express.js, MongoDB, Node.js
- Techniques: Handling and **synchronization** of API requests & responses with promised-based library **Axios.**

Compiler for COOL Language | Group |

- A lexer, parser, semantic analyzer, and code generator that is used to compile COOL programming language.
- Technology: C++
- Techniques: Utilization of concepts such as Finite State Machines, Abstract Syntax Trees and tools such as **Flex** and **Bison**, to convert COOL to MIPS assembly language.

<u>Database system for business to business trade</u> | Group |



2020

- A fully functional database to organize transactions between businesses with a user-friendly interface.
- Contribution: Developing the database
- Technology: MySQL, PHP, Django

Tool to generate and display fractals | Individual | (7)

2020

- A tool to display two fractal sets: Mandelbrot and Julia set, according to user preferences.
- Technology: Java
- Techniques: Multi-threading, Synchronization Primitives

8-bit single cycle processor | Group | (7)

2020

- · An 8-bit single cycle CPU with associated memory hierarchy. The processor includes an ALU, register files, control logic, forwarding unit, data memory, data cache, instruction memory and instruction cache.
- Technology: Verilog-HDL
- Techniques: RISC-V, Caching

EXPERIENCE

Technical article writer 2021 Feb - Present

Medium blog | Syncfusion blog | Enlear Pvt. Ltd.

Casual Instructor

Department of Computer Engineering, University of Peradeniya

• CO322: Data Structures and Algorithms

2022 Oct-Present

Supervising weekly 2hr long lab sessions, preparing tutorials related to data structures and algorithms.

• CO253: Introduction to Programming and Networking

2021 Nov- 2022 Jan

Supervised weekly 2hr long online lab sessions based on C programming Language.

• CO222: Programming Methodology

2021 May- 2021 Sep

Supervised weekly 2hr long online lab sessions, created questions for online quizzes based on the C Language.

TECHNICAL SKILLS

Languages Python, C/C++, Java, JavaScript, HTML/CSS, SQL, Verilog HDL, ARM Assembly Language

Frameworks React.js, Express.js

TensorFlow, Keras, OpenCV, NumPy, Matplotlib, pandas Libraries

EXTRA-CURRICULAR ACTIVITIES & LEADERSHIPS HELD

Member of the Web Consultation team of University of Peradeniya 2020 - Present Secretary in IET on Campus of the University of Peradeniya 2022 - Present President of the Music Society of the University of Peradeniya 2022 - Present

REFERENCES

Prof. Roshan G. Ragel | roshanr@eng.pdn.ac.lk

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

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