Isuri Devindi

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I'm a 3rd year computer engineering undergraduate, currently seeking internship opportunities in the fields of **Computer Vision** and **Machine Learning**.

EDUCATION

University of Peradeniya	2018 Nov - Present
BSc. in Computer Engineering	*GPA: 4.00/4.00*

Hillwood College, Kandy	2004 - 2017
G.C.E. Advanced Level Examination	*Z-Score: 2.2768*
District Rank - 6, National Rank - 113	

ACHIEVEMENTS

IEEEXtreme 14.0 | 24 hour global algorithmic programming competition — 2020
Country Rank – 68, Global Rank – 724 (Out of 2000+ teams)

Hacktitude | An inter-university hackathon organized by the company 99x — 2022
Rank – 32 (Out of 200+ teams)

Hackfest | An inter-university hackathon organized by the University of Peradeniya — 2022
Rank (Healthcare category) – 1 (Out of top 20 teams)

Hackdown | An inter-university coding competition organized by
IEEE WIE Student branch of University of Moratuwa, Sri Lanka — 2019
Rank – 37 (Out of 100+ teams)

CIMA Certificate level completion — 2018

Fit-in-Deutsch 2 — 2014
Passed with 73 marks (out of 80)

PROJECTS

Oral Cavity Region Detection System | project page | repository — 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: Explored 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 | report | video | colab — 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(Wiener Filter)**

Remote Proctoring system | project page | repository | video — 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 | repository   2022
  - The combination of a lexer, parser, semantic analyzer, and code generator that can be used to compile programs written in the 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.

Database system for business to business trade | repository   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 | repository   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 | *Verilog-HDL*   2020
  - An 8-bit single cycle CPU with associated memory hierarchy. The processor includes an ALU, register file, control logic, forwarding unit, data memory, data cache, instruction memory and instruction cache.
  - Technology: Java
  - Techniques: **RISC-V, Caching**

EXPERIENCE

Technical article writer | **Medium blog** | **Syncfusion blog** | **Enlear Pvt. Ltd.**   2021 Feb - Present

Casual Instructor | *Department of Computer Engineering, University of Peradeniya*

   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 programming Language

TECHNICAL SKILLS

Languages	C, Python, Java, HTML/CSS, JavaScript, SQL, Verilog HDL, ARM Assembly Language
Frameworks	React.js, Express.js
Developer Tools	Git, Google Cloud Platform, VS Code
Libraries	TensorFlow, Keras, OpenCV, NumPy, Matplotlib, pandas

SOFT SKILLS

Techinical Writing: Currently working as a technical writer at Enlear Private Limited, writing content related to software application development.

Public Speaking: Moderated several virtual events organized by IET On Campus University of Peradeniya and virtual and physical events organized by the Faculty of Engineering, University of Peradeniya.

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	2021 - 2022
Member of the Rotaract club of the University of Peradeniya	2020 - Present
Member of the Dramatic Society of the University of Peradeniya	2020 - Present

REFERENCES

Dr. Isuru Nawinne | isurunawinne@eng.pdn.ac.lk
Senior Lecturer, Department of Computer Engineering, Faculty of Engineering, University of Peradeniya, Sri Lanka