ISURI DEVINDI

Department of Computer Engineering, University of Peradeniya, Sri Lanka





GPA: **4.00/4.00** Class rank: **1/415**

First Class Hons.

My primary research interest evolve around applying **Machine Learning** and **Computer Vision** techniques in **biomedical context**. I am also interested in building low-energy pervasive sensing applications using **Neuromorphic vision sensors**.

EDUCATION

BSc.Eng (Hons.) in Computer Engineering

University of Peradeniya 2018 Nov - 2023 Dec

G.C.E. Advanced Level Examination Z-Score: 2.2768

Hillwood College, Kandy

2004 - 2017

District rank: **6/2784**National Rank: **113 / 32075**

EXPERIENCE

2024 Jan Instructor

- Present Department of Computer Engineering, University of Peradeniya, Sri Lanka

Computer Architecture (CO224), Image Processing (CO543), Operating Systems (CO327)

2023 Jan Visiting Research Assistant Supervised by Prof. Archan Misra

- 2023 May Pervasive Sensing & Systems Lab, Singapore Management University

Exploring spatiotemporal compressive sensing techniques for event-based data fed into and processed by Spiking Neural Networks.

2021 - 2022 **Teaching Assistant**

Department of Computer Engineering, University of Peradeniya, Sri Lanka

Embedded Systems (CO321), Data Structures and Algorithms (CO322), Programming and Networking (CO253), Programming Methodology (CO222)

2021 - Present Technical Article Writer (Part-time)

Enlear Pvt. Ltd

Writing technical content on computer vision, machine learning, and web development.

PUBLICATIONS

IEEE Access

Accepted

Multimodal Deep Convolutional Neural Network Pipeline for Al-Assisted Early Detection of Oral Cancer



Isuri Devindi, Dinura Dissanayake, Sashini Liyanage, Achintha Harshamal, Dhanushki Mapitigama, Nadisha Piyarathne, Kalani Hettiarachchi, Sumudu Rasnayaka, Ruwan Jayasinghe, Roshan Ragel, Isuru Nawinne

Nature Scientific



A Novel ECG Compression Algorithm Using PWM-Integrated Quantization for Low-Power Real-Time Monitoring

Isuri Devindi, Sashini Liyanage, Titus Jayarathna, Janaka Alawatugoda, Roshan Ragel

Oral Oncology Reports Comprehensive Dataset of Annotated White Light Images of Oral Cavity and Novel Web Tool for Image Annotation



N. S. Piyarathne, S.N. Liyanage, R.M.S.G.K. Rasnayaka, P.V.K.S. Hettiarachchi, **G.A.I. Devindi**, F.B.A.H. Francis, D.M.D.R. Dissanayake, R.A.N.S. Ranasinghe, M.B.D. Pavithya, I. Nawinne, R.G. Ragel, R.D. Jayasinghe

ACHIEVEMENTS

Gold medal for excellence in Computer Engineering

Awarded for the best performance at the Department of Computer Engineering, University of Peradeniya (Out of 60)

2024 Prize for Engineering Mathematics

Prof. T.D.M.A. Samuel prize awarded for the enthusiasm and excellence in Engineering Mathematics at the Faculty of Engineering, University of Peradeniya (Out of 415)

2023 Bronze Award in NBQSA 2023 National ICT Awards

Bronze award in Tertiary Student Projects (Technology) (Out of 46 teams) for the project "Oral Cavity Image Annotation and Cancer Prediction from White Light Images"

IEEEXtreme 16.0 24 hour global algorithmic programming competition

Team Name – bitLasagna, Country Rank – 27, Global Rank – 427 (Out of 14600+ participants)

OTHER PROJECTS

2022 Jan

- 2022 March

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2020

2022

Reconstructing Highly Degraded License Plates | Group

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

2021 Remote Proctoring System | Group

A single device with video streaming facility that integrates the hardware and software components needed to conduct virtual proctoring of an examination in a university.

Technology: React.js, Express.js, MongoDB, Node.js

8-bit single cycle processor | Group

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: Verilog-HDL

EXTRA-CURRICULAR ACTIVITIES & LEADERSHIPS HELD

Member of the Web Consultation team of University of Peradeniya

Secretary in IET on Campus of the University of Peradeniya
President of the Music Society of the University of Peradeniya

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 **Dr. Isuru Nawinne** | isurunawinne@eng.pdn.ac.lk

Senior Lecturer, Department of Computer Engineering, Faculty of Engineering, University of Peradeniya, Sri Lanka **Prof. Archan Misra** | archanm@smu.edu.sg

Vice Provost (Research), School of Computing & Information Systems, Singapore Management University, Singapore