

Sanduni Ubayasiri

Computer Engineering Undergraduate student
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PROFILE



A highly motivated individual with a strong passion for Algorithmic Problem Solving, Machine Learning and Computer Vision. Eager to leverage skills and knowledge to provide innovative solutions to real-world challenges.

EDUCATION

University of Peradeniya | *BSc.Eng(Hons.) in Computer Engineering* Mar. 2021 – Present
Current GPA 3.95/4.00

Mahamaya Girls College, Kandy | *G.C.E. Advanced Level Examination* Jan. 2006 – Aug. 2019
Z-Score 2.7781 *District Rank: 3/1189 , National Rank: 49/19508*



PROJECTS

Head Impact Monitoring System for Athletes (Impax) | Group |  |  Nov. 2023 – Jan. 2024

- Developed a comprehensive head impact monitoring system for athletes in contact and non-contact sports which consists of wearable devices, a middleware and desktop application for monitoring
- Contribution:** Developed the middleware and communication system(within LAN) between devices with MQTT
- Technologies: *Electron JS, Python, Node JS, MongoDB, RaspberryPi, Arduino, MQTT*

Bitcoin Heist Ransomware Identification | Group Mar. 2024 – Present

- Developing a machine learning model to predict transactions related to ransomware payment
- This system can assess the risk associated with specific addresses, entities, or transaction patterns within the Bitcoin network
- Technologies: *Python, TensorFlow*

Color Analysis Tool for Plant Leaves (LeafQuantifier) | Group |  |  Aug. 2023 – Nov. 2023

- Developed a mobile application with a cloud backend that utilizes image processing techniques to quantify the color distribution of leaves by analyzing information extracted from captured leaf images
- Contribution:** Implemented image processing techniques to segment the leaves and produce the histogram of the plant leaves
- Technologies: *Python, OpenCV, Pytorch, FastAPI, Flutter*

Obstacle Bot for Pera Swarm Robotic Project | Group Feb. 2024 – Present

- Developing automated obstacle robots for the swarm robotics arena which can move to desired positions and act as static or dynamic obstacles
- Updating the firmware of the obstacle bot with collision avoidance algorithms and integrating the obstacle bot with the existing visualizer
- Technologies: *Python, Java, Arduino, MQTT*

Export-Quality Mango Fruit Identification System | Group Mar. 2024 – Present

- Developing a prediction system to identify defective and non-defective mango fruits using traditional image processing techniques and computer vision
- Technologies: *Python, OpenCV*

Database of Cricket Statistics(CricLive) | Group |  |  Mar. 2023 – Jun. 2023

- Developed a cricket data management system for in-depth analysis of player performance, team performance, and match outcomes
- Contribution:** Designed the relational database and complex queries to store, manage, and retrieve information about cricket matches, players, and statistics
- Technologies: *Node.js, Express.js, React.js, MySQL, WebSocket*

EXPERIENCE

Casual Instructor

Department of Computer Engineering, University of Peradeniya

- GP 106 Computing Jan. 2023 – Jun. 2023
Supervised 4hr long weekly lab sessions based on Python Programming, prepared lab sheets, quizzes and assisted in designing a project based on Python language and Arduino MCU
- CO 222 Programming Methodology Oct. 2023 – Jan. 2024
Supervised 2hr long weekly lab sessions based on C programming, prepared lab sheets and quizzes

TECHNICAL SKILLS

Languages: Python, C, Java, Verilog HDL, SQL , JavaScript, HTML/CSS

Frameworks: React.js, Node.js, FastAPI

Developer Tools: Git, Google Cloud Platform, VS Code, PyCharm, IntelliJ

Libraries: Pytorch, TensorFlow, OpenCV, NumPy, Matplotlib, pandas

ACHIEVEMENTS

Mrs. Nimala Peiris Award 2022 Jul. 2023

Award for the Best Performance in General Program in Engineering

SLIOT Challenge 2023 | *Annual IoT Competition* Mar. 2024

1st runners-up in the University category (Out of 100+ teams)

MoraXtream 8.0 | *12 hour algorithmic programming competition* Nov. 2023

National Rank - 4 (Out of 450+ participants)

IEEEExtreme 17.0 | *24 hour algorithmic programming competition* Nov. 2023

Global rank - 374 (Out of 16500+ participants)

ACES Coders 10.0 | *12 hour algorithmic programming competition* Oct. 2023

National Rank - 12 (Out of 350+ participants)

CERTIFICATES

Supervised Machine Learning: Regression and Classification Mar. 2024

Stanford University and DeepLearning.AI(Coursera)

Game Theory Mar. 2024

Stanford University(Coursera)

Engineering Drawing and 3D Modelling using AutoCAD Mar. 2021

TecView Insitute

EXTRA CURRICULAR ACTIVITIES

Editor in IEEE WIE SB Affinity Group 2024- Present

Committee Member in Association of Computer Engineering Students 2023 - 2024

Design Team Member in IEEE WIE SB Affinity Group 2023 - 2024

Volunteer in IEEE RAS Student Chapter 2021 – 2022

REFERENCES

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

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