



Sathira Silva



Department of Computer Engineering,
University of Peradeniya,
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I'm an enthusiastic, ambitious final-year computer engineering undergraduate who has developed a number of problem-solving skills, eager to secure a Computer Vision RA internship/job opportunity.

EDUCATION HISTORY

B.Sc.Eng(Hons) in Computer Engineering

University of Peradeniya | Nov. 2018 - Present

- GPA: 3.65 / 4.00

G.C.E. Advanced Level Examination

De Mazenod College, Kandana | 2003 - 2016

- Comb. Maths (A)
- Physics (B)
- Chemistry (B)

ACHIEVEMENTS

ACES Coders v9

Rank - 2 / 100+

Team Name: *bitLasagna*

2022

Inter-university
Algorithmic Programming
Competition

IEEEExtreme 16.0

Country Rank - 27, Global Rank - 427 / 6373

Team Name: *bitLasagna2.0*

2022

ICDS Mini Hackathon

Rank - 5 / 100+

Team Name: *bitLasagna*

2021

Inter-university
Data Science
Hackathon

IEEEExtreme 14.0

Country Rank - 2, Global Rank - 68 / 7000+

Team Name: *InterGreat*

2020

ACES Coders v7

Rank - 14 / 100+

Team Name: *bitLasagna*

2020

Inter-university
Algorithmic Programming
Competition

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INTERESTS

Computer Vision

Machine Learning

Algorithmic Programming

Image Processing

Deep Learning

Natural Language Processing

TECHNICAL SKILLS

Languages: C/C++, Python, Java,
JavaScript, HTML/CSS, SQL

Developer Tools: Visual Studio, Visual
Studio Code, Eclipse, Jupyter Notebook,
GitHub, Atom, IntelliJ IDEA

Technologies/Frameworks: OpenMMLab,
PyTorch, TensorFlow, OpenCV, TensorFlow,
ReactJS, NodeJS, Bash Scripting, Jekyll

PROJECTS



Improving 3D Semantic Occupancy Prediction using Spatiotemporal Transformers (S2TPVFormer) **[ongoing]**

Technologies: Computer Vision, Python PyTorch, MMCV

Mar. 2023

- **We're the first group** to contribute to improving **TPVFormer**, an already existing **SOP** transformer architecture, by introducing **temporal consistency**.
- Implemented temporal self-attention mechanisms on top of existing spatial cross-attention.
- Our method gained a substantial **3.1%** improvement in mIoU for 3D SOP in **nuScenes** public dataset.



Automatic License Plate Recognition

Technologies: Python, Image Processing, OpenCV, OCR

Mar. 2022

- Implemented a Python command line tool to detect and recognize Sri Lankan license plates from images.
- Used OpenCV to localize the license plate from the image and segment the characters from the license plate.
- Used OCR to recognize the characters from the segmented images.



Sobriety Detection using Gyroscope Data

Technologies: Python, TensorFlow, Scikit-learn, NodeJS, ReactJS

Jan. 2022

- Analyzed gyroscope data by visualization using signal processing techniques.
- Data cleaning, pre-processing, and feature extraction using various methods.
- Implemented machine learning and deep learning models to classify data.
- Contributed to developing a Node server to collect and process the data as well as to develop a prototype mobile application using ReactJS.

[↔ More Projects...](#)

REFERENCES

Prof. Roshan G. Ragel [↗](#)

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

Dr. Isuru Nawinne [↗](#)

*Senior Lecturer,
Department of Computer Engineering,
Faculty of Engineering,
University of Peradeniya, Sri Lanka*

CERTIFICATIONS

Natural Language Processing **2022**

Coursera
HSE University

Algorithms on Graphs **2020**

Coursera
University of California, San Diego

Data Structures **2020**

Coursera
University of California, San Diego

Convolutional Neural Networks **2020**

Coursera
DeepLearning.AI

Neural Networks and Deep Learning **2020**

Coursera
DeepLearning.AI

EXPERIENCE

Teaching Assistant: Programming Methodology

University of Peradeniya | May 2021 - Sep. 2021

- Supervised weekly 2hr long online lab sessions.
- Created questions for online quizzes based on the C programming language.
- One-on-one sessions with students to tutor them on the C programming language concepts.

Engineering Intern: Computer Vision

[↗ Vega Innovations](#) | Dec. 2022 - Mar. 2023

- Contributed to the integration of an architecture called NEAT (Neural Attention Fields for Autonomous Driving) into an autonomous vehicle system, by reviewing the paper and understanding its internals.
- Developed real-time computer vision solutions for autonomous vehicles on embedded systems (Nvidia DRIVE PX2 / Jetson TX2).