



Sathira Silva



Department of Computer Engineering,
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I'm an enthusiastic, ambitious fourth-year computer engineering undergraduate who has developed a number of problem-solving skills, eager to secure a SE / Computer Vision / ML / AI job opportunity.

EDUCATION HISTORY

B.Sc.Eng(Hons) in Computer Engineering

University of Peradeniya | Nov. 2018 - Present

- GPA: 3.55 / 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

2023

Inter-university
Algorithmic Programming
Competition

IEEEEXtreme 16.0

Country Rank - 34, Global Rank - 768 / 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)

Technologies: Computer Vision, Python PyTorch, MMEngine

- Contributed to improving TPVFormer, an already existing transformer architecture, by introducing spatiotemporal contexts.
- Implemented temporal self-attention mechanisms on top of existing spatial cross-attention.
- Experimented with DETR3D head to test the generalization capability of S2TPVFormer encoder.

Automatic License Plate Recognition

Technologies: Python, Image Processing, OpenCV, OCR

- 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

- 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...](#)

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).

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,
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