

Visal Jayathilaka

Undergraduate — Software Engineer — Research Intern

visaljayathilaka@gmail.com — (+94) 71-886-4469 — linkedin.com/in/visal-jay — github.com/visal-jay

EDUCATION

University of Colombo School of Computing, Colombo, Sri Lanka Expected Graduation: 2024
 Bachelor of Science (Hons.) in Computer Science Current Cumulative GPA: 3.90/4.00
 Thesis Title: Continual Learning Self-Organising Maps (SOM) with Controlled Plasticity

PROFESSIONAL EXPERIENCE

IFS R&D International Colombo, Sri Lanka
Data Scientist May 2024 — Present

The AI Team Colombo, Sri Lanka
Software Engineer June 2023 — March 2024

- Research on solutions to mitigate hallucination in LLMs and fine-tuning OpenAI LLM.
- Prompt engineering and research on quantitatively measuring the changes.

Software Engineer Intern November 2022 — May 2023

- Involved in the development and improvement of a SaaS product for a client.
- Engaged in software development, bug fixing, and the creation of engineering documentation.

ACADEMIC EXPERIENCE

Cognitive Systems and Time Series Lab University of Colombo School of Computing Colombo, Sri Lanka
Research Investigator May 2023 — May 2024
Research Intern November 2022 — May 2023

University of Colombo School of Computing Colombo, Sri Lanka
Undergraduate Teaching Assistant - SCS 1212 (Foundation of Computer Science) November 2023 — May 2024
Undergraduate Teaching Assistant - SCS 1203 (Database I) June 2023 — October 2023

PROJECTS

Continual Learning Self-Organising Maps (SOM) with Controlled Plasticity *Undergraduate*

- Developed an innovative time-invariant SOM designed for continual learning.
- Introduced a plasticity factor to balance the plasticity-stability dilemma.

Forecasting Multivariate Time Series with Reduced Event Dimensionality - GitHub Personal

- Windowed Time Series data into events and reduced dimensionality using Self-Organizing Maps (SOM).
- Training a multi-layer perceptron (MLP) to forecast subsequent events.

Line Following Robot with Q-Learning - GitHub *Undergraduate*

- Implemented a Q-learning algorithm to enable the robot to learn line-following capabilities adaptively.
- Used LEGO EV3 Robot enabling the actions of line following in either orientation and obstacle avoidance.

Time invariant Self-Organising Map (SOM) methods - GitHub *Research Intern*

- Implemented time-invariant SOM methods from current literature.
- Convergence is visualizable across 1D, 2D, and 3D spatial dimensions.

Lumen - GitHub *Undergraduate*

- Lumen is a secure course delivery platform built to protect the intellectual works of online course providers.
- Contributed to course management and exam administration and student functionalities.

Community Retreat - GitHub *Undergraduate*

- Community Retreat is a platform connecting individuals eager to contribute to society with CSR projects.
- Contributed to project management, architecture setup, and feature development.

AWARDS

Hacktitude Winner 2022 99x, Sri Lanka
Part of the winning team in an inter-university virtual hackathon

IEEEExtreme 15.0 - Sri Lanka Rank #50 2021 IEEE

President Scout 2018 Scout Association, Sri Lanka
School Colours 2019 Nalanda College, Colombo, Sri Lanka
School Merit 2017 Nalanda College, Colombo, Sri Lanka

SKILLS

- **Programming:** Python, PHP, C++, Javascript, Typescript, SQL
- **Technologies:** Tensorflow, Scikit-learn, Weka, React.js, Express.js, Node.js, Git
- **Soft Skills:** Teamwork, Problem-solving, Communication

OTHER EXPERIENCES

Problem Setter for Competitive Programming Competitions

Problem Setter

- National Olympiad of Informatics Monthly Contests Sri Lanka
- ReidXtreme 2.0 University of Colombo, Sri Lanka
- 8 Weeks of Code University of Colombo School of Computing, Sri Lanka

REFERENCES

Dr. Manjusri Wickramasinghe

Senior Lecturer

Department of Computation and Intelligent Systems

University of Colombo School of Computing, Sri Lanka

E-mail: mie@ucsc.cmb.ac.lk

Profiles: Google Scholar — LinkedIn

Pasindu Wijesena

CEO, The AI team, Sri Lanka

E-mail: pasindu@the-ai.team

Profiles: LinkedIn