



RAVINDI WEERASINGHE

B.Sc. Engineering (Hons) Undergraduate

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About Me

I am an ambitious undergraduate passionate about technology and its potential to make a positive impact. With a strong foundation in computer science and data science, I thrive on innovation and problem-solving. I look forward to contributing my knowledge in a dynamic industry setting where I can showcase strong leadership and foster meaningful collaboration.

Technical Skills

- Programming Languages**
Python | Java | C++
- Machine Learning & Deep Learning**
Scikit Learn | Pytorch | Tensorflow
- NLP and LLM**
HuggingFace | LangChain | OpenAI
ChromaDB | Neo4j
- Web & App Development**
HTML | Angular | FastAPI
- Data Analysis**
PowerBI | Pandas
- version Control**
Git | Github

Certifications

- Machine Learning for Natural Language Processing - AWS Academy ([cert](#))
- Generative AI with Large Language Models - DeepLearning.AI ([cert](#))
- Feature Engineering - Kaggle ([cert](#))

Education

- University of Moratuwa, Katubedda, Sri Lanka 2021 - Present
BSc Eng Hons, Computer Science & Engineering **CGPA: 3.83**
 - Specializing in Data Science and Engineering
 - Dean's List: All semesters from 3 - 7
- Aquinas College of Higher Studies, Colombo 08 2020 - 2021
Diploma in English Language and Literature
- Sirimavo Bandaranaike Vidyalaya, Colombo 07 2011 - 2019
G.C.E. Advanced Level (Physical Science Stream) (2019) **3A's**
 - Island Rank : 173
G.C.E. Ordinary Level (2016) **9A's**

Experience

- IronOne Technologies (Pvt) Limited 2023 Nov - 2024 May
Intern ML Engineer
 - Chat Applications: Contributed to the development of two LLM and RAG-based chat applications for academic and business users, focusing on R&D, prompt engineering, testing, and performance optimization.
 - Document Summarization Project: Contributed to the development of an LLM/transformer model-based summarization tool, focusing on R&D, dataset preparation, and model fine-tuning to deliver concise and accurate summaries.
 - Represented Team IronOne for the ICIIT Conclave 2024 Shared Task.

Publications

- A.K. Warnakulasuriya, **C.D.R.M. Weerasinghe**, H.K.G.V.L. Wickramaratna, Shiveswaran Ratneswaran, Uthayasanker Thayasivam, "**Explainable Bus Arrival Time Prediction Model with Improved Features Related to Topography and Points of Interest**", In proceedings of the 27th IEEE International Conference on Intelligent Transportation Systems, 2024 ([Abstract](#)).
- C.D.R.M. Weerasinghe**, M.R.A.A.K. Gunasinghe, H.B.K.S. Siriwardana, Indika Perera, "**Enhancing Text Segmentation with Positional Encoding and Sentence Embeddings: An Unsupervised Clustering Approach**", In proceedings of the 9th International Conference on Information Technology Research, 2024 ([Abstracts of Proceedings, 2024, p.76](#)).

Academic Interests

- Data Science
- Mathematics
- Statistics
- Natural Language Processing

Other Skills and Interests

- Content Writing
 - Freelance Content Writer for Social Media Marketing
 - Top 50 Contestant in “My Zesta Story”
- Team Work & Leadership
- Adaptability and Fast Learning
- Effective Communication
- Time Management

References

Dr. Uthayasanker Thayasivam

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Mr. Lushanthan Sivaneasharajah

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Projects

- **Corporate Report Summarization** 2024 March - Present
Final Year Project
A segmentation-based framework using pre-trained transformer models to summarize lengthy documents. The project includes an application to generate concise corporate report summaries and extract insights like key information and sentiments, enhancing accessibility. The segmentation framework was published at the **9th International Conference on Information Technology Research (ICITR) 2024**.
Contribution : Development of segmentation framework and content selection.
Tech Stack : Python, Pre-trained transformer models
- **Bus Arrival Time Prediction** 2023 July - 2023 Nov
Data Science and Engineering Project - Semester 5
A machine learning project to predict bus arrival times under heterogeneous traffic conditions. The project employs machine learning models and temporal, topographical and points of interest-related features to predict the arrival time of a bus at the next immediate step. This work has been accepted and published at the **27th IEEE International Conference on Intelligent Transportation Systems (ITSC) 2024**.
Contribution: Preparing machine learning models for prediction and feature importance analysis
Tech Stack: Python, XG Boost, SHAP
- **LLM-based learning assistant for Advanced Level Biology Students**
Personal Project
An LLM-based chat application to answer questions related to the G.C.E. A/L Biology syllabus. This application provides answers to user questions based on the resource books published by the National Institute of Education.
Tech Stack: Python, LangChain, HuggingFace, LLMs, Faiss, Fast API, Angular
- **RPAL Interpreter** 2023 June - 2023 July
CS 3513 - Programming Languages Project - Semester 4
An interpreter for the functional programming language RPAL consists of lexical analyzer, parser and a CSE machine. The interpreter can execute a given RPAL program by constructing the abstract syntax tree, standardizing the AST and evaluating the program to get the output.
Contribution: Parser (Construct the standard tree from the token list)
Tech Stack: Java
- **Bank Transaction Management System** 2022 Oct - 2023 Jan
CS 3043 - Database Systems Project - Semester 3
A bank transaction management system which enables users to carry out different tasks like registering new accounts, applying for online loans, online transactions etc. through a web application. The web API supports access control for different kinds of users and password authentication.
Contribution: Database, Backend
Tech Stack: MySQL, Nodejs, JavaScript

Extra-Curricular

- **Department Representative** 2024 June - Present
 - Department of Computer Science and Engineering (Intake - 2020)
- **CSE40 - Marketing Team** 2024 December - Present
- **Prefects' Guild - Sirimavo Bandaranaike Vidyalaya, Colombo 07**
 - Senior Prefect - 2018
 - Junior Prefect - 2014 & 2015
- **Art Society - Sirimavo Bandaranaike Vidyalaya, Colombo 07**
 - Committee Member - 2018