KUMUDH RANASINGHE

COMPUTER SCIENCE AND ENGINEERING UNDERGRADUATE

CONTACT

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📍 16, Gangadara Mawatha,
Mount Lavinia, Colombo

TECHNICAL SKILLS

Programming Languages
Python | C++ | Java | JavaScript

Web Development
HTML | CSS | React | Express |
Vue | Flask | Django | FastAPI

Database Systems
MySQL | MongoDB

Machine Learning
Pandas | Keras | Scikit-Learn |
PyTorch | Langchain | Numpy

Development Tools
Git | VSCode | Docker | Linux

SOFT SKILLS

- Teamwork
- Leadership
- Time Management
- Self Motivated
- Excellent Communication
- Organized

COMMUNICATION SKILLS

- English (Fluent)
- Sinhala (Native)

PROFILE

I am an ambitious undergraduate pursuing a B.Sc. Engineering Honours degree in Computer Science and Engineering at the University of Moratuwa. Passionate about machine learning and data science, I thrive under pressure, adapt to dynamic challenges, and possess strong self-management skills. With a commitment to continuous learning and teamwork, I aim to leverage my expertise to contribute meaningfully to the fields of computer science and technology for societal betterment.

EDUCATION

University of Moratuwa   2022 - Present
B.Sc. Engineering (Hons)   CGPA - 3.6604
Specialization - Computer Science & Engineering
Field - Data Science & Engineering

S. Thomas' College   2018 - 2020
G.C.E A/L's 2020 - 3A's   Z-Score - 2.3298

Vidura College   2007 - 2017
G.C.E O/L's 2017 - 9A's

PROJECTS

LLM Tutoring Chatbot 📎   Jun 2024 - Present
GPT-4 | Langchain | React | Django | FastAPI | MySQL | AWS
An Intelligent Chatbot powered by LLMs to provide personalized instruction and support to students. The chatbot is made context-aware using chat history and a curriculum specific knowledge base implemented using RAG architecture. Other features of the chatbot include guided problem solving, adaptive teaching based on student profiles, chat personalization and resource recommendation. The chatbot is available through web interface and Whatsapp integration.

Stock/Crypto Forecasting Application 📎   May 2024 - Jun 2024
SKLearn | Pandas | Torch | Vite | Flask
Web application where the user can enter the ticker(Stock abbreviation) and a date range to visualize the prediction against the actual data. The application is powered by an ensemble model built using a time series model and a regression model. The time series model is used to capture the short and long term trends of the stock whereas the regression model is used to capture market trends using external data.

INTERESTS

- Generative AI
- NLP
- Computer Vision
- FinTech
- Robotics & Automation

REFERENCES

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RPAL Interpreter 📎   Mar 2024 - May 2024

Python

An Interpreter built using python to run programs written in the RPAL language. The interpreter consists of a Lexical Analyzer, Parser, AST Generator, Standardizer and a CSE machine. Added functionalities such as viewing the intermediate renditions of the interpreter are made available as well.

Wearable for Industrial Workplace 📎   Dec 2023 - Feb 2024

Arduino | NodeRed | MQTT | MySQL | React | Express

A wearable to be worn by personnel working in potentially hazardous environments. Consists of sensors to take environment readings as well as measure user's vitals. The wearable communicates via edge computing units to the central server where analytics can be performed via the web application.

Airline Reservation System 📎   Aug 2023 - Nov 2023

MySQL | React | NodeJS | Express

A full stack web application for an airline system with the functionalities of user login, flight search, passenger detail collection, seat booking, and booking completion. Also an admin panel was integrated into the application for data analytics.

COMPETITIONS

- ENIGMA (2024)
- Predicta 1.0 (2024)
- ML Olympiad - Sustainable Urban Living (2024)
- Home Credit - Credit Risk Model Stability (2024)
- SLIoT Challenge (2023)
- MoraXtreme 8.0 (2023)

CERTIFICATIONS

Amazon Web Services 📎
- AWS Academy Machine Learning Foundations
- AWS Educate Introduction to Cloud 101
- AWS Educate Machine Learning Foundations
- AWS Educate Introduction to Generative AI
- AWS Educate Getting Started with Security
- AWS Educate Web Builder

Kaggle 📎
- Intro to Machine Learning
- Intermediate Machine Learning
- Intro to Deep Learning
- Computer Vision
- Intro to Game AI and Reinforcement Learning
- Advanced SQL

Nvidia
- Getting Started with Accelerated Computing in CUDA C/C++ 📎
- Getting Started with Deep Learning 📎

CIMA
- Certificate in Business Accounting - CIMA Cert BA