Tharindu Dhanushka

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Summary

Third-year Computer Engineering undergraduate at the University of Ruhuna with a strong foundation in machine learning, artificial intelligence, and web development. Proficient in designing intelligent systems, developing scalable web applications, and leveraging modern frameworks to solve complex problems. Adept at managing end-to-end software development lifecycles and applying innovative solutions to real-world challenges.

Skills

- Programming Languages: Python, C++, SQL, JavaScript
- Machine Learning Tools: TensorFlow, Scikit-learn
- Data Analysis: Pandas, NumPy, Matplotlib, Seaborn
- Databases: PostgreSQL, Vector Databases, MongoDB, MySQL, SQLite
- DevOps: Linux administration, CI/CD, Docker, Jenkins, Computer networking.
- Tools and technologies: Postman, Git, Jira, Agile development.
- Back-end development: Django, Flask, Node.js Next.js
- Data Structures and Algorithms
- Front-end Development: Streamlit, Gradio, React, Next, Tailwind CSS
- Software architecture , Project planning and management, and Strong communication skills.

Education

University of Ruhuna, BSc (Hons) in Computer Engineering **Mar 2022**

- **Related coursework:** Artificial Intelligence(AI), Machine learning(ML), Software project, Web development, DevOps Engineering, Computer Architecture, Data structures and Algorithms, Design patterns, Operating System programming,, GUI development, Embedded Systems, Object Oriented Programming, Databases.

Experience

Junior Data Scientist (collaborator), Omdena Zambia Chapter - Link **May 2024 – June 2024**

- Developed and Deployed Machine Learning Application For Omdena.
- Contributed to Data Collecting Part.

Junior Machine Learning Engineer (Collaborator), Omdena Nigeria Chapter - Link **Jun 2024 - Aug 2024**

- Developed and Deployed Machine Learning Application for Omdena.
- Contributed to create Machine Learning Model Using LSTM and Random Forest Regressor.

Projects

AI Plagiarism Detector(in Progress) - GitHub Link

- Developing a full-stack Django and React application with SQLite as Database
- Focusing on similarity checking using Cosine Similarity and pre-trained models like GPT for assignments and web content.

MeetingMinute (Meeting Summarizer Multi Agent System) - GitHub Link

- Developed a real-world Meeting Summarizer application using CrewAI multi-agent system, incorporating 4 crews and 8 agents in a Sequential Processing method.
- Integrated OpenAI as the LLM, AssemblyAI for speech transcription, a Text-to-Speech API for audio processing, and Composio API for automated email triggering.
- Utilized MongoDB as the primary database and Qdrant as the vector database for efficient data storage and retrieval.

AI Chatbot with Memory Capabilities - GitHub Link

- Developed an intelligent chatbot using LangChain and Google's Gemini AI with MongoDB integration for persistent memory storage across multiple user sessions.
- Implemented multilingual support and deployed a responsive web interface using Gradio framework on Hugging Face Spaces, enabling seamless conversation in 5 different languages.

PDF Research Assistant powered by GroqLM and LangChain - GitHub Link

- Developed an AI-powered PDF research assistant using GroqLM and LangChain for advanced document analysis and question-answering.
- Integrated vector-based retrieval, conversation memory, and a user-friendly Gradio interface for seamless interaction.

QBot - PDF Query Answering Chatbot - GitHub Link

- **QBot** is an intelligent chatbot that answers user queries by extracting relevant information from uploaded PDF documents.
- The application uses LangChain, Hugging Face, and vector databases(Chroma) to deliver accurate and context-aware responses and Use Gradio as a Frontend.

Restaurant Revenue Prediction Using Machine Learning - GitHub Link

- Built a machine learning model to predict restaurant revenue using historical data.
- Applied Random forest Regressor, Linear Regression for modelling and **Principal Component Analysis (PCA)** for dimensionality reduction to improve model efficiency.
- Tools Used: Scikit-Learn, Pandas, NumPy, Matplotlib, Seaborn

Resume Analyzer Using AI and NLP - GitHub Link

- Developed a Streamlit-based frontend and Python backend with PostgreSQL for database management.
- Automated resume parsing using **PyResParser** and text extraction with **PDFMiner**.
- Tools Used: PyResParser, Psycopg2, Plotly, PDFMiner, Pandas

Other projects

- Django Full Authentication System Using Django ,Next.js and PostgreSQL - GitHub Link
- Chest Disease Detection and Classification using CNN(Resnet50) - GitHub Link
- Student Registration and Module Enrolment Desktop Application(Python) - GitHub Link

Competitions

- Ranked **778th globally** and **55th in Sri Lanka** at the **IEEEXtreme 18.0 Programming Competition** among over 8,700 teams worldwide.
- **Finalist** in the Gen AI Hackathon conducted by **Veracity Group**, ranking among the **top 15 out of 70+ teams** in a 1-week competition, where we developed a **real-world Meeting Summarizer application** using CrewAI multi-agent system.

Certifications

- DeepLearning.AI TensorFlow Developer by DeepLearning.AI on Coursera. Certificate earned at May 6, 2024 - Link
- Machine Learning with Python by IBM on Coursera. Certificate earned at May 17, 2024 - Link
- Neural Networks and Deep Learning by DeepLearning.AI - Link
- Programming for Everybody (Getting Started with Python) by University of Michigan - Link

References

Dr. Rajitha Udawalpola

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