Ahamed Dhahlan

(+94) 77 958 09 67 | ahameddhahlan3890@gmail.com | Linkedin | Github

Summary

Experienced data scientist and machine learning engineer with a strong focus on transformers and LangChain agentic models. Skilled in developing and deploying advanced natural language processing (NLP) solutions, leveraging frameworks like PyTorch, Hugging Face Transformers, and LangChain to create intelligent, context-aware systems. Proficient in Python, R, and SQL, with hands-on experience in building end-to-end machine learning pipelines, predictive modeling, and data-driven decision-making. Adept at delivering scalable solutions that drive innovation and enhance user engagement.

Education

University of Ruhuna, Sri Lanka 2021 – 2025
Bachelor of Science in Engineering (Honors) - Electrical and Information *Galle, Sri Lanka*

Zahira College, Kalmunai 2017 – 2019
GCE Advanced Level and GCE Ordinary Level *Kalmunai, Sri Lanka*

Experience

Paralegal.lk Sep 2024 – Present
Software Engineer Intern *Hybrid*

- Integrated payment solutions into the website using PayHere services and React, enhancing transaction capabilities.
- Conducted network analysis of legal case citations, significantly improving the website's search engine efficiency by 200%.
- Collaborated on diverse web development tasks, emphasizing front-end functionality and optimizing user experience.

Mahaweli Authority of Sri Lanka August 2023 – January 2024
Electrical and information Engineer Intern *Victoria, Sri Lanka*

- Led the design and implementation of a cutting-edge real-time dam simulation system, meticulously crafted to cater to the requirements of the Victoria Dam Control Room and Observation Platform.
- Implemented a Dam Gate opening prediction app

Projects

Singlish GPT: Language Model for Sinhala in English Letters July 2024

- Developed a GPT model for Singlish text processing and generation using mT5 and achieved a 92% accuracy in text generation tasks.
- Technology Used: **Python, Hugging Face, transformers, PyTorch, Aksharamukha, Google Gemma**

DeChatIn: AI-Powered Chatbot for Conversational and Voice Interactions January 2025

- Developed an AI-driven chatbot application with voice conversation capabilities, enabling natural, human-like interactions and seamless switching between speech modes.
- Enhanced conversational dynamics with real-time speech synthesis and improved user engagement through intuitive voice interactions.
- Technology Used: **Python, Streamlit, Google gemma, Huggingface Transformers, Google Text-to-Speech (TTS), Natural Language Processing, Generative AI**

CodeForgeAI: Code Generation from Webpage Screenshots September 2024

- Created a tool to generate code from webpage screenshots with real-time previews, enhancing coding efficiency.
- Technology Used: **Python, Django, React, Gemini, Generative AI**

EduZone: An Innovative E-learning Platform - Group Project July 2024

- Developed a comprehensive e-learning platform that includes courses and projects, utilizing React for frontend development and django for the backend.
- Integrated Python and Django to handle server-side logic and manage database interactions efficiently.
- Technology Used: **React, Python, Django, JWT token, Machine Learning**

Trading Helper Agent: A Conversational Assistant for Stock Analysis January 2025

- Built an intelligent conversational agent to assist with stock analysis, integrating tools for fetching stock data, stock news, and calculating moving averages.
- Leveraged the **LangChain** framework to enable seamless interaction with external tools and incorporated a custom language model using **Google Gemma**.
- Implemented dynamic query handling and real-time processing of stock-related queries using **Python, Hugging Face Transformers, Langchain Agent, PyTorch, Streamlit, and YFinance**.

Third Eye Glove for the Visually Impaired May 2024

- Developed a wearable glove for blind individuals, using computer vision and ultrasonic sensors to detect obstacles and provide real-time feedback through vibrations and sounds.
- Implemented advanced image processing techniques to identify objects and terrain.
- Technology Used: **Raspberry Pi, ATmega 328p, Computer Vision, Image Processing, Ultrasonic Sensors, Python, OpenCV**

Research Papers

Coexistence Mechanism Between eMBB and URLLC in 5G Wireless Networks Jan 2025

- Conducted a research study on the coexistence of eMBB and URLLC traffic in 5G wireless networks, focusing on efficient resource allocation strategies.
- Developed synthetic datasets for eMBB traffic (Python, up to 4 concurrent users over 1ms) and URLLC traffic (Matlab, Poisson process with 7 mini-slots per 1ms).
- Proposed and implemented a puncturing scheme to minimize the impact of URLLC traffic on eMBB users by prioritizing users with the lowest MCS and iBLER values.
- Designed and trained two neural networks to automate the selection process, testing four architectures (Baseline, Dropout NN, BatchNorm NN, Deep NN), with Deep NN achieving the best performance.
- Technology Used: **Python, Matlab, Neural Networks, Machine Learning, 5G Wireless Networks, Data Analysis**

Skills

Programming Languages: C, C++, Python, JavaScript
Data Science/ML Libraries: TensorFlow, PyTorch, scikit-learn, NumPy, Pandas
Machine Learning Skills: NLP, Computer Vision, Model Training, Hyperparameter Tuning
Web Development: HTML, CSS, JavaScript, React.js, Node.js, Django
Databases: MySQL, MongoDB
Development Tools: Git, VSCode, Jupyter Notebook
Soft Skills: Problem Solving, Self-Learning, Presentation, Adaptability, Critical Thinking

Certificates

- Certificate in Introduction to Web Development with HTML, CSS, JavaScript
- Certificate in Introduction to Cloud Computing
- Certificate in Introduction to Deep Learning & Neural Networks with Keras
- Certificate in Machine Learning with Python
- Certificate in Python for Data Analysis: Pandas & NumPy
- edX Verified Certificate for Data Science: Machine Learning
- Certificate in SystemVerilog for ASIC/FPGA Design & Simulation

Achievements

Participant, Commercial Bank Hackathon, Commercial Bank June 2024

2nd Runners up, Haxtreme 2.0, IEEE Society November 2023

Top 10%, AWS Deep Racer, AWS Augest 2023