Ahamed Dhahlan

(+94) 76 010 43 14 | ahameddhahlan3890@gmail.com | Linkedin | Github

Summary

Dynamic ML Engineer skilled in Python, TensorFlow, and scikit-learn. Excels in crafting innovative solutions for NLP, computer vision, and predictive analytics. Collaborative team player committed to staying at the forefront of ML advancements.

Education

University of Ruhuna, Sri Lanka March 2021 – Present
Bachelor of Science (Honors) - B.S. in Electrical and Information Engineering *Galle, Sri Lanka*
CGPA: 3.5/4.0 (Second Class-Upper Division)

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

Projects

LipLexa: An Innovative AI-powered lip reading system for videos January 2024

- utilizing TensorFlow and OpenCV to accurately interpret speech from visual cues.
- Engineered a cutting-edge solution for real-time lip reading, enhancing accessibility for the hearing impaired and advancing human-computer interaction in multimedia applications.
- Leveraged deep learning techniques to train LipLexa, enabling it to accurately transcribe speech from video content, with potential applications in security, assistive technology, and media analysis.
- Technology Used : Python, OpenCV, Tensorflow, Matplotlib

GloSign: Empowering Deaf Communication February 2024

- A comprehensive sign language translator system aimed at facilitating communication for deaf individuals.
- Utilized gesture recognition technology, speech-to-text algorithms, machine learning algorithms for lip reading, and wearable device integration.
- Achieved 96% accuracy in gesture recognition, resulting in seamless translation of sign language gestures into text and speech.
- Technology Used: Python, C++, Arduino, ML

RealVision+: An Advanced Face Recognition and Expression Analysis Application. September 2023

- Developed a cutting-edge face recognition app capable of accurately identifying individuals and predicting their gender in real-time.
- Technology Used: Python, ML, OpenCV, Matplotlib

Intrusion Detection System using Machine Learning: Enhancing Network Security July 2024

- Developed an advanced Intrusion Detection System (IDS) leveraging machine learning techniques to detect and mitigate network intrusions, providing real-time monitoring and alerting capabilities.
- Utilized both supervised and unsupervised learning approaches to analyze network traffic and identify anomalous behavior, ensuring comprehensive security coverage.
- Technology Used: Python, scikit-learn, TensorFlow, Flask/Django, pandas, numpy, SQL

WeedSense: Automated Weed Removal February 2024

- Gathered a diverse dataset comprising images of both plants and weeds across various environmental conditions. Employed preprocessing techniques including grayscale conversion and image resizing to standardize input data for model training.
- Developed a feature extraction pipeline to convert image data into a vectorized format suitable for machine learning algorithms. Utilized techniques such as pixel-level vectorization to represent image characteristics effectively.
- Implemented a Support Vector Machine (SVM) classification algorithm to differentiate between plants and weeds based on extracted features.
- Evaluated the model's accuracy using robust validation techniques such as cross-validation and held-out dataset testing. Achieved a high accuracy rate of 93%, demonstrating the effectiveness of the proposed approach in automated weed detection.
- Technology Used: Python, Arduino, ML, Sensors

GestureGear: an interactive hand-gesture car racing gaming project January 2024

- Implemented real-time hand tracking and gesture recognition functionalities to enable players to control virtual cars through intuitive hand movements.
- Leveraged MediaPipe's hand tracking module and applied Computer Vision techniques from OpenCV to accurately detect and interpret hand gestures.
- Programmed the system to translate hand gestures into precise control commands, allowing players to steer, accelerate, and brake their virtual cars seamlessly.
- Technology Used : Python, OpenCV, Mediapipe, Matplotlib

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

- Developed a GPT model that processes and generates text in Singlish (Sinhala in English letters), providing natural language interactions in Singlish.
- Trained the mT5 model using a comprehensive dataset and integrated it with Google Gemma and various libraries to enhance its performance.
- Technology Used: Python, Hugging Face, transformers, PyTorch, Aksharamukha, Google Gemma

CodeForgeAI: Code Generation from Webpage Screenshots with Real-time Preview July 2024

- Developed CodeForgeAI, an innovative tool that generates code from screenshots of web pages, providing a real-time preview feature to enhance coding efficiency and accuracy.
- Implemented advanced image processing and machine learning techniques to accurately interpret and convert webpage designs into functional code snippets.
- Technology Used: Python, OpenCV, TensorFlow, Flask/Django, JavaScript, HTML/CSS

Technical Skills

Languages: C/C++, Python, Javascript, HTML+CSS
Libraries : Pandas, Numpy, Matplotlib, Seaborn, TF-IDF, TensorFlow, PyTorch, Pygame, Tkinter
Web Dev Tools: Nodejs, VScode, Git, Github
Frameworks: ReactJs
Cloud/Databases:MongoDb, Firebase, Relational Database(mySql)
Relevent Coursework: Data Structures & Algorithms, Operating Systems, Machine Learning, Database, Artificial Intelligence, Natural Language Processing, Computer Vision
Areas of Interest: AI based controll system, LLM, Computer Vision, Data Science
Soft Skills: Problem Solving, Self-learning, Presentation, Adaptability, Critical Thinking

MOOCs

- 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

2nd Runners up Haxtreme 2.0, IEEE Society November 2023

Top 10% AWS Deep Racer, AWS Augest 2023

Referees

Dr. Kushan Sudheera
Senior Lecturer
Department of Electrical and Information Engineering
Faculty of Engineering
University of Ruhuna
Galle, Sri Lanka
+94719693164
kushan@eie.ruh.ac.lk