HAZMAN NAIM BIN AHSAN

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Professional Experience

DAH REPLY AI Kuala Lumpur, WP Kuala Lumpur
AI Developer October 2023 – January 2024

- Part of the AI Backend Research and Development team, responsible for innovating and implementing AI technologies for various applications such as a product embedding generator, e-commerce recommender system, speech-to-text application, and spam detection algorithm for multiple clients.
- Improved team productivity by 75% through the adoption of effective project management strategies, utilising version control with Git and GitHub for seamless collaboration and progress tracking, resulting in consistent achievement of project milestones.
- Proficient in deploying machine learning models using the FastAPI framework, ensuring high-performance and scalable solutions. Leveraged AWS EC2 services for pipeline deployment, optimising resource utilisation, and significantly reducing execution time.
- Demonstrated expertise in API load testing using tools like Postman and Locus, ensuring the robustness and reliability of deployed AI solutions. Conducted rigorous testing protocols to validate the functionality and performance of APIs before deployment.

Training and Certification

IBM AI ENGINEERING PROFESSIONAL CERTIFICATE
Link to Repository November 2023

DATA SCIENTIST BOOTCAMP-GENERAL ASSEMBLY (K-YOUTH DEVELOPMENT PROGRAMME)
Link to Repository October 2023

KPMG AU DATA ANALYTICS VIRTUAL EXPERIENCE PROGRAM ON FORAGE
Link to Repository August 2023

Projects

TRASH OBSERVATIONS WITH YOLO
Link to Project February 2024

- Developed and trained a YOLOv8n model for detecting and segmenting underwater elements including trash, animals, and plants.
- Processed a dataset comprising 7212 annotated images, meticulously prepared for training using the PyLabel library to ensure efficient processing and annotation.
- Implemented advanced techniques such as data augmentation and transfer learning to enhance the model's robustness and adaptability to underwater environments.
- Achieved a high mAP50 score of 0.911, validating the system's efficacy in accurately identifying and categorising underwater trash, thereby contributing to more efficient and effective trash management efforts.

COMPUTER VISION-CONCRETE STRUCTURE DEFECT DETECTION WITH U-NET
Link to Project December 2023

- Implemented and trained an EfficientNet-B1 U-Net model to detect defects in concrete structures, leveraging CUDA for accelerated computation.
- Trained the model over 60 epochs, utilising deep learning methodologies and assessing performance using Jaccard and Dice indices.
- Applied advanced techniques such as data augmentation and transfer learning to enhance model robustness.
- Resulted in the successful development of a defect detection system with high precision and recall rates, contributing to improved structural safety.

KAGGLE COMPETITION-BINARY PREDICTION OF SMOKER STATUS USING BIO-SIGNALS
Link to Project November 2023

- Successfully participated in a Kaggle competition, competing against over 1908 data scientists and machine learning practitioners from all around the world.
- Tasked with developing a predictive model to classify individuals based on smoker status, aiming for a high AUC score to demonstrate model efficacy.
- Applied a strategic approach, combining three tree-boosted algorithms with weighted voting, cross-validated predictions, and parameter optimization using Optuna.
- Resulted in an AUC score of 0.87178, securing a top 28% position in the Kaggle competition and showcasing superior predictive capabilities in smoker status prediction using bio-signals.

Education

UNIVERSITI MALAYA Kuala Lumpur, WP Kuala Lumpur
Bachelor of Science, Physics September 2019 - March 2023

- Grade: *Pass with Honours*
- Best Presentation Award for Final Year Project "Studies on Bipolar Outflows in Star Forming Region AFGL5142 with ALMA".

UNIVERSITI MALAYA Kuala Lumpur, WP Kuala Lumpur
Foundation Studies in Science (Physical Science) September 2018 – August 2019

- Grade: *Pass and Completed*
- MUET: *Band 3*

Skills

Programming Language	Python (Experience), SQL (Experience), R (Beginner), C (Beginner), Latex (Experience)
Softwares and Tools	GitHub (Intermediate), Jupyter (Intermediate), Anaconda (Intermediate), R Studio (Beginner), AWS EC2 (Beginner), Power BI (Experience), QGIS (Beginner), NVIDIA Jetson Nano (Beginner)
Data Science	Data Preprocessing, Data Visualization, Data Analysis, Model Development, Machine Learning, Deep Learning, Model Evaluation, NLP, Computer Vision, Artificial Intelligence, Image Processing
Libraries and Packages	Scikit-learn, TensorFlow, PyTorch, Keras, Matplotlib, Pandas, NumPy, SciPy, Seaborn, Plotly, Folium, Dash, Flask, FastAPI, OpenCV