LIM ZHENG XUAN

limzhengxuan98@gmail.com | (+65) 81896929 | LinkedIn | GitHub | Website

WORK EXPERIENCE

AI Singapore **Jan 2023 – Present**

AI Apprentice (AIAP Batch #15)

- Completed an extensive training programme covering topics such as Neural Networks, Time Series, Computer Vision, Natural Language Processing and MLOps
- Formulated and developed data cleaning and feature engineering pipelines using Kedro to automate data preprocessing for downstream tasks, increasing data ingestion efficiency
- Implemented RAG architecture using vector databases to integrate document retrieval methods, increasing the accuracy of generated responses
- Experimented Prompt Engineering techniques (e.g., Few Shot, Chain of Thought) using LangChain to steer LLMs towards generating desired outputs
- Evaluated the performance of LLMs on grammar correction tasks using metrics such as BLEU, METEOR and additional in-house developed metrics to provide a comprehensive quality assessment
- Designed automated test cases using Pytest, ensuring high code quality and reliability

BioQuest Advisory **Jul 2022 – Dec 2022**

Data Science Intern

- Executed maintenance works, including troubleshooting and process performance analysis, for a RPA project built using UiPath, ensuring high process reliability during production
- Developed a chatbot Proof-Of-Concept using a SaaS tool, followed by UAT sessions to ensure product meets the requirements of the client

National University Health System (NUHS) **May 2022 – Jul 2022**

AI & Data Science Intern

- Built a RESTAPI service from scratch to carry out ETL processes using an enterprise-level data integration software to support a chatbot application
- Performed deployment of the RESTAPI service through Docker and Kubernetes in the test environment
- Collaborated in a team of 6 members following the Agile SCRUM framework to develop the chatbot application according to Sprint objectives

EDUCATION

National University of Singapore (NUS) **2019 – 2023**

- Bachelor of Engineering with Honours (Distinction)
- Minor in Computer Science

PROJECTS

Fake Face Detection

- Achieved 60% test accuracy on fake face detection task by leveraging a pretrained InceptionResnet model with custom classifier head built using PyTorch
- Hosted the AI engine using a Python Flask application to facilitate efficient inferencing, streamlining the prediction process
- Implemented Explainability AI techniques (GradCAM) to improve model transparency and interpretability, enabling users to better understand AI predicted outputs

Mahjong Tile Detection

- Performed image augmentation on an image dataset using OpenCV to expand dataset by 10 times
- Trained a YOLOv7 model to accurately detect and classify 3 types of Mahjong tiles on images, videos and in real-time using webcam

SKILLS

Python | SQL | Java | Numpy | Pandas | Scikit-Learn | Matplotlib | TensorFlow | PyTorch | HuggingFace | Git | Docker | Kubernetes | Kedro | MLOps | Agile