

# LIM ZHENG XUAN

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## WORK EXPERIENCE

### ST Engineering | Deepbrain

Nov 2024 - Present

#### AI/ML Engineer

- Led the development of a Full-Stack web application with Automatic Speech Recognition (ASR) capabilities for a hotline service, enhancing the workflow of around 40 users
- Developed a Natural Language Understanding (NLU) engine to accurately extract key entities from transcribed text to automatically populate structured forms
- Managed AWS resources such as IAM, ECR, S3 and EC2 for secure and scalable cloud deployments
- Designed and developed a microservice application using AWS Bedrock to leverage LLM capabilities for text summarization
- Collaborated across cross-functional teams to gather requirements and deliver solution that meets stakeholders standards and satisfaction

### AI Singapore

Jan 2024 – Oct 2024

#### AI Apprentice (AIAP Batch #15)

- Formulated and developed data cleaning and feature engineering pipelines using Kedro to automate data preprocessing for downstream tasks, increasing data ingestion efficiency
- Developed an LLM-based solution for English grammar correction and multi-class error classification, consisting of 60 distinct error types
- Employed various Prompt Engineering techniques (e.g., Few Shot, Chain of Thought) using LangChain to steer LLMs towards generating desired outputs, improving error classification performance by 46%
- Implemented RAG architecture using Milvus vector database to integrate document retrieval methods, further increasing solution performance by 20%
- Achieved an additional 8% improvement in performance through fine tuning of LLMs using OpenAI SDK and hyperparameter tuning
- Mentored a group of 6 newer apprentices on machine learning concepts and good software practices to accelerate their learning experience in the programme

### Bioquest Advisory

Jul 2022 – Dec 2022

#### Data Science Intern

- Executed maintenance works, including troubleshooting and process performance analysis, for an automation project built using UiPath, ensuring smooth run of the process 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)

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

## PROFESSIONAL CERTIFICATIONS

- Chartered AI Engineer (CAIE) - Associate AI Engineer
- AWS Certified Cloud Practitioner

## SKILLS

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