

Lim Zhe Xun

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EDUCATION

Nanyang Technological University

Bachelor of Computer Science - Data Science and Artificial Intelligence

Cumulative GPA: 4.67/5.0

Aug 2021 - May 2025

WORK EXPERIENCE

Kineability

Machine Vision Engineer

Aug 2025 - Present

- Developed production GUI features and refactored UI components within a markerless motion capture application.
- Optimized and integrated Segment Anything (SAM2) in PyTorch, implementing batch and step-wise inference to achieve 80 FPS real-time segmentation.
- Designed a training-free 6 Degrees-of-freedom pose estimation pipeline for an 8-camera RGB multi-view setup.

Digital Trust Center

May 2024 - Dec 2024

Undergraduate Researcher

- Conducted a comprehensive survey of eight state-of-the-art machine unlearning methods for LLMs.
- Designed and curated a dataset to perform approximate unlearning on LLaMA 3 via relabeled gradient descent.
- Prototyped an interactive Streamlit web application to showcase the performance of unlearned models.

Robert Bosch ASEAN

May 2023 - Dec 2023

Machine Learning Intern

- Constructed a pipeline to generate synthetic 3D object data using Blender to augment training datasets.
- Fine-tuned YOLOv4 for object detection in a low-data environment, achieving 96% mAP through data blending.
- Developed Retrieval-Augmented Generation (RAG) system with LLaMa 2, attaining 75% average recall.

DSO National Laboratories

May 2022 - Aug 2022

Machine Learning Intern

- Built a two-stage video segmentation pipeline leveraging FCANet and STCN, achieving 82% Jaccard score.
- Designed a web application using FastAPI for the backend and React for the frontend.

PROJECTS

Autonomous PowerPoint Agent

2024 - 2025

- Designed LLM-powered agent framework to operate PowerPoint, improving benchmark accuracy by 23%.
- Conducted ablation study to optimize GPT-4o-mini for prompt engineering, function calling, and fine-tuning.
- Built a Streamlit interface for natural language user interaction

Sales Lead Generation

2024

- Developed a web scraping pipeline using BeautifulSoup and Scrapy to collect potential prospect business websites.
- Implemented LLM prompt engineering and function calling to identify Applicant Tracking System used by businesses.

Image Segmentation for Precision Farming

2022 - 2023

- Constructed hydroponic monitoring system to automatically capture and preprocess image data of 100 crops.
- Benchmarked leaf segmentation task using Mask R-CNN and STCN, reporting > 97% F1-score.

Image Classification for Real-time Screw Identification

2022

- Implemented a semi-automatic system to collect and label an image dataset of 4 common screw types.
- Fine-tuned and benchmarked VGG16, InceptionV3, EfficientNet and CNN models, achieving > 95% mAP.
- Deployed Telegram chatbot via Heroku cloud application platform for real-time image classification.

Automation of Video Subtitling and Quality Control

2021

- Developed Python program and user interface to reduce 80% of video subtitling workload.
- Implemented computer vision techniques to automatically flag out invalid subtitles.

SKILLS

Languages: Python, Java, C++, R, SQL

Frameworks: Pytorch, Tensorflow, Scikit, NLTK, Langchain, HuggingFace, OpenCV, Pandas, Flask, Streamlit

Certifications: Google AI Essentials, Google Business Intelligence Specialization, AWS Cloud Operations