# TAM, Ka Ho Sam

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# Education

### The Chinese University of Hong Kong

Expected Jul 2025

B.Eng. in Artificial Intelligence: Systems and Technologies

- Major GPA: 3.795/4.000
- Awards: Dean's List: 2021-22, 2022-23, 2023-24; CSE Outstanding Academic Performance (Bronze), 2023-24
- Relevant Courses: Python, C++, Statistical Analysis, Time Series, Applied Deep Learning, NLP

## Work Experience

#### Machine Learning Intern, Glassbox AI Limited, Sha Tin

Jun 2024 - Nov 2024

- Developed a backend pipeline for automated data fetching from multiple APIs and performing LLM inference with fine-tuned LLaMa using Python, Flask, and MySQL
- Worked with LLaMa and streamlit for Chinese-to-sign-language translation task
- Studied temporal alignment techniques on gesture sequences, including DTW and CTC loss

# **Projects**

### Final Year Project: Invariant Hand Gesture Representation Learning with Contrastive Learning PyTorch

Sep 2024 – Apr 2025

- Enhanced model generalization over unseen data classes (static hand gestures) with few-shot inputs
- Implemented curriculum-based augmentations (curriculum learning) with large unlabelled synthetic datasets (MANO) alongside labelled data
- Explored temporal contrastive learning techniques on dynamic gesture recognition by testing on LSTM

Named Entity Recognition (NER) Project () | Python, Deep Learning, NLP

Mar 2025 - Apr 2025

- Fine-tuned BERT for Named Entity Recognition
- Evaluated entity masking on model performance and generalizability over unseen named entities.

Vision Transformers: Scaling on Small-Scale Datasets () | Python, PyTorch

Jun 2023 - Apr 2024

• Evaluated generalizability of Vision Transformers (ViTs) like ViT, DeiT on small-scale datasets compared to CNN-based architectures like ResNet.

#### Android Event-Planning App (7) | Java

Mar 2023 - Jan 2024

- Managed end-to-end software development cycle from UI design, core functions to backend integration
- Optimized data handling with RoomDatabase and SQL queries

## Deep Q-Learning Agent for Third-Person Shooter Game $\Omega$ | Python, Keras

Oct 2022 – Dec 2022

- Collaborated in a team of 2 to create a custom Python Gym environment for a 2D third-person shooter game
- Implemented an AI agent with **Deep Q-Network** that increased average kill streak by 30× and extended survival time by  $4\times$  over baseline

# Skills

**Programming:** Python, Java; C/C++

Web & Backend: Flask, MySQL; Git, Docker, Linux; HTML/CSS, JavaScript; React

AI/ML: PyTorch, TensorFlow, Keras, Pandas, NumPy, OpenCV, Matplotlib

Specializations: Computer Vision (ResNet, U-Net, ViT, GANs, Diffusion), Natural Language Processing

(LSTM, BERT, LLaMa), Reinforcement Learning (DQN)

Language: Cantonese (Native), English (Fluent), Mandarin (Native)