

# Cheng Ho Ming

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## Education

### The University of Hong Kong

Bachelor of Arts and Science in Applied Artificial Intelligence (BASc(AppliedAI))

Sep 2023 – Jul 2027 (Expected)

- CGPA: 3.56/4.30    Second Major: Computer Science

## Professional Experience

### Radio Television Hong Kong (RTHK)

Summer Intern, Engineering Section (Broadcast Systems), Production Services Division

Jun 2025 – Aug 2025

- Researched the feasibility of correcting Cantonese subtitle transcription errors with **Streamlit** and **PyCantonese**, and developed a demo system for internal evaluation, demonstrating a significant reduction in manual proofreading time through automated error detection.
- Developed a Python-based video post-processing tool using **OpenCV** and **MediaPipe** for a visitor workshop; enabled a one-button automated workflow to record, save, add effects, and playback, generating hundreds of unique showcase videos.
- Researched and evaluated webcam-based motion capture tools for 3D model animation; selected and tested a free solution (System Animator) and validated 3D asset workflow (FBX to VRM conversion) using **Blender** and **Unreal Engine**.

### InspireLab Limited

Summer Intern, Embedded Software Developer

May 2024 – Aug 2024

- Engineered a **RISC-V** microcontroller STEM toolkit, integrating 5+ open-source libraries and controlling over **64+ I/O components**.
- Developed a C-based, API-level hardware simulator to decouple software from hardware, enabling rapid parallel testing and iteration.

## Project Experience

### 30-Day All-Cause Hospital Readmission Prediction with MIMIC-IV

Oct 2025 – Dec 2025

- Applied **advanced machine learning techniques** (Stacked Generalization, Automatic Machine Learning, ModernBERT LoRA fine-tuning, Natural Language Processing, LightGBM/XGBoost/CatBoost, feature engineering), achieving **10% improvement** in AUROC over baseline models.
- Identified and reported critical **future data leakage** in the dataset that artificially inflated AUROC to 0.95, demonstrated how such flaws lead to over-optimistic models that fail in clinical production.
- Secured **1st Place** on the Kaggle Public Leaderboard by identifying and exploiting data patterns, subsequently leading to a change of competition rules and dataset cleaning.

### alphahku.page

July 2025 – Aug 2025

- Developed a static website for a student organization using **Next.js**, shadcn/ui, Tailwind CSS, and deployed on Vercel.

### Reproducing RealFill (a research paper on SIGGRAPH 2024)

Mar 2025 – May 2025

- Implemented and benchmarked a custom two-stage process on original RealFill pipeline based on LoFTR keypoint matching to improve Stable Diffusion inpainting authenticity by filtering output samples and treat them as pseudo-ground truth.

### Stock Market Simulator (C++ Terminal Game)

Apr 2024

- Led a team of 5 in **oversighting Software Development Life Cycle** for a C++ terminal-based game course project.
- **Reduced time-to-market and developer friction** by implementing CI/CD pipelines on 3 platforms using GitHub Actions, automating compilation and code checks for all pull requests.

### PyInstaller (Open Source Development)

Jul 2021 – Nov 2021

- Contributed **15+** custom PyInstaller hooks, all merged and adopted upstream in 2021, improving library compatibility and developer experience.

## Skills

**Languages:** Native Cantonese, Fluent Mandarin and English

**Programming:** Python, C/C++, Java, MySQL, MongoDB

**Web Development:** React.js, Next.js, Express.js, Tailwind CSS

**Tools:** Linux, Git, CI/CD (GitHub Actions), Docker, L<sup>A</sup>T<sub>E</sub>X

**AI/ML:** PyTorch, AutoML, Hugging Face, Streamlit, OpenCV, MediaPipe, NLTK, BERT