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**: 3.52/4.30 **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: React/Next.js student organization website *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, LaTeX
AI/ML: PyTorch, AutoML, Hugging Face, Streamlit, OpenCV, MediaPipe, NLTK, BERT