# Cheung Ka Fai

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# EDUCATION

## The University of Hong Kong

Sep 2019 – Aug 2023

Bachelor of Arts and Science (Applied AI)

CGPA 3.38

- Bronze award recipient in the EEG & AI competition hosted by the Faculty of Education
- Explored advanced topics in machine learning, including deep learning architectures and model selection methods
- Proficient in implementing various machine learning algorithms using Python with PyTorch

#### EXPERIENCE

### Castco Testing Centre Limited

Sep 2023 – Present

AI Programmar

- Developed PyQt tool to enhance document handling efficiency by 50% using Google Cloud Platform services
- Created a Jetpack Compose smartwatch app with real-time heart rate detection and location services for clients in the construction industry
- Collaborated as a member of a 6-person team to develop item detection software capable of detecting and matching 50 items in under 3 seconds

**PONS.ai** May 2022 – Aug 2022

AI Engineer Intern

- Conducted research on state-of-the-art generative AI models and techniques for image style transfer
- Optimized the AI pipeline by incorporating traditional algorithms and neural networks, resulting in a 2/3 reduction in inference time
- Contributed to the entire development cycle, including data collection, image preprocessing, and experimentation with different approaches using StyleGAN

#### Projects

#### Lingua Ladder | Flutter, AWS, MySQL, HTTP

Feb 2024 – Present

- Developed and deployed a cross-platform word game using Flutter, accessible on both Web and Google Play Store
- Implemented daily puzzle updates, with play records connected to AWS DynamoDB for efficient data management
- Enhanced user experience by creating a responsive UI and incorporating smooth animations
- Actively engaged with user feedback and community input to drive continuous improvement and enhance gameplay experience

#### AI Phone Agent | Python, Twilio, OpenAI, TTS, LangChain, Flask

Jan 2022 – May 2022

- $\bullet$  Developed an AI phone answering agent utilizing Natural Language Processing (NLP) techniques and Large Language Model (LLM)
- Capable of answering user queries and engaging in dynamic conversations, while ensuring seamless transcription and support for human-like voices in multiple languages
- Accelerated information retrieval and chat generation time to less than a second
- Effectively regulate the agent's behaviors and ensure up-to-date and accurate information delivery by designing an optimal prompt

#### Improving traning algorithms | Research, Python, Pytorch

Sep 2022 – May 2023

- Conducted research on novel optimization ideas to improve the generalization ability of Adam-like optimizers
- Conducted extensive reviews of the latest improvements and their theoretical foundations in computer vision, which inspired our original improvements
- Carried out more than 100 experiments on various CNN architectures and optimizers to demonstrate the faster convergence and improved generalization ability of our optimizer

## TECHNICAL SKILLS

**Languages**: Python, C/C++, Kotlin, Dart

Frameworks: Flutter, Jetpack Compose, Flask, Pytorch, PyQt

Developer Tools: Git, Google Cloud Platform, Amazon Web Services, Twilio, CloudFlare

Libraries: pandas, NumPy, Matplotlib, LangChain