

Hill Choy

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SUMMARY

I am a recent graduate with a degree in Computer Engineering from HKUST. I am currently working as a Research Assistant at HKUST (Department of Computer Science and Engineering). My research interests primarily lie in the area of Machine Learning / Artificial Intelligence and its practical applications, with a particular focus on computer vision. I am currently seeking further studies, research or work opportunities.

EDUCATION

Hong Kong University of Science and Technology (HKUST)

BEng in Computer Engineering (Second Class Honors, Division 1)

Graduation: July 2024

IELTS Academic

8 (Out of 9), (R:8.5,L:9,W:7,S:7)

TOEFL iBT

103 (Out of 120), (R:30/30,L:30/30,W:24/30,S:19/30)

RESEARCH EXPERIENCE

1. Advanced Video Analytics and Edge AI for Smart Carpark Systems

Hong Kong University of Science and Technology

Bachelor Degree Final Year Project (Supervisor: Prof. Shueng-Han Gary Chan, CSE Department, HKUST)

- Developed a smart car park system that utilizes edge AI to provide real-time parking space availability. It is capable of informing drivers of available parking spaces while minimizing the computational, installation, and maintenance costs of the system.
 - Utilized **SOTA** You Only Look Once (YOLO) series models for the detection of cars.
 - Implemented a MobileNetV3-based backbone in YOLOv8 to reduce the number of parameters while maintaining optimal performance.
 - Utilized the LoRaWAN network to reduce the overall costs of network equipment installation and development.

PROFESSIONAL EXPERIENCE

Hong Kong University of Science and Technology

Hong Kong

Research Assistant (Supervisor: Prof. Shueng-Han Gary Chan, CSE Department, HKUST)

08/2024 - Present

- Developed computer vision-based solutions using **SOTA** YOLO series models to meet the various needs of different projects.
- Developed web applications using Python and Flask for processing and displaying information acquired from Object Detection/Instance Segmentation/Human Action Recognition results.
- Optimized models and application pipelines to deploy **SOTA** computer vision models on devices with limited computing power and low bandwidth scenarios.
- List of Projects:
 - K11 MUSEA Cars and Pedestrians Flow Monitoring System (**Ongoing**)
 - Hong Kong Tseung Kwan O Hospital Patients Alert System (**Ongoing**)
 - Privacy Preserving Elderly Monitoring with a Novel Edge AI Camera
 - Hong Kong ICT Awards 2024, Smart People (Smart Ageing) Silver Award

Hong Kong Telecom

Hong Kong

Intern (Fixed Networks Operation - Integrated Service Provision Center)

06/2023 - 07/2024

- Upgraded internal tools with Python to improve the efficiency of the department's daily operations.
- Assisted in the development and integration of an AI chatbot for training purposes, providing answers based on standard flow instructions for employees within the department.

COURSES AND SKILLS

- **COMP 4221:** Introduction to Natural Language Processing.
- **COMP 4332:** Big Data Mining and Management.
- **COMP 4222:** Machine Learning with Structured Data.
- **COMP 4621:** Computer and Communication Networks.
- **Skills:** Python, C++/C, SQL, Linux, PyTorch, LoRaWAN, STM32 and Arduino Platform.

ADDITIONAL

- **Languages:** Cantonese(Native), Mandarin(Basic), English(Fluent), Japanese(Foundation)