Hill Choy

hhchoy@ust.hk **hillhc** +852-61718745 **https://hillchoy.com**

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 - Prsent*

- 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 Recongnition 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**)
  - Eldery Fall Alert System (**Ongoing**)
  - Hong Kong Tseung Kwan O Hospital Patients Alert System (**Ongoing**)

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)