

MADLINE CHAN

@ ypcmadeline@gmail.com

in linkedin.com/in/ypcmadeline

github.com/madelinchan

EXPERIENCE

Computer Vision Researcher

Dayta.ai

June 2022 – Current

- Assisted in building object tracking and detection for videos.
- Implemented uniform and action classification on shop surveillance videos.
- Optimized demographic classification.

MOKE image processing Engineer Intern

Hong Kong University of Science and Technology

Jul 2021 – Sept 2021

- Collected Magneto-optic Kerr effect (MOKE) images from electronic microscope under suitable settings.
- Optimized the quality of skyrmion images using different computer vision algorithms from OpenCV and ski-image.
- Designed user-friendly Graphic User Interface by QML.

Research Assistant

Spintronics Quantum Material Laboratory

Apr 2021 – Jun 2021

- Collected highly variable driving data for visual navigation.
- Conducted performance analysis on different deep neural networks with robotics car and evaluated the result on autonomous racing.

Undergraduates Researcher

Undergraduates Research Opportunities Program

Jun 2020 – Sept 2020

- Conducted experiments on magnetic memory and memristor.
- Implemented an automatic testing system among magnetic field sensors, Keithley source meters and lock-in amplifier.
- Implemented real-time plotting for efficient data analysis

PROJECTS

CT Image Segmentation

- Performed image segmentation on 3D CT tumour images.
- Used 3D UNet with residual connection for training.

Surgery Video-Phase-Recognition

- Implemented a temporal recognition network classify surgical phase recognition.
- Used ResNet50 as feature extractor and LSTM to capture temporal frames.

Self-driving car on Carla with CNN

- Implemented deep reinforcement learning to achieve autonomous navigation task.
- Used Q learning with CNN to build the model.

EDUCATION

Bachelor of Computer Engineering

The Hong Kong University of Science and Technology (HKUST)

Sep 2018 – Sep 2022

- Coursework**
- Artificial Intelligence for Medical Image Analysis
- Deep Learning in Computer Vision
- Deep Learning for Natural Language Processing
- Object-Oriented Programming and Data Structures
- Final year project: Self-driving simulation with Deep reinforcement learning

SKILLS

- Programming Languages:** Python, C++, Java, MySQL, QML
- Frameworks and Tools:** Numpy, Pandas, Pytorch, TensorFlow, Keras, OpenCV, Scikit-Learn, Matplotlib, SQL, Git, Bash, LaTeX
- Area:** Machine Learning, Deep Learning, Computer Vision, Data Science

LANGUAGES

Fluent English, Mandarin

Intermediate Japanese (N3)

Native Cantonese

AWARDS

- Dean List (2022 Spring), HKUST

VOLUNTEER

Executive Committee member | Editorial Team

Hong Kong Astronomical Society

Oct 2020 – Current

- Invite experienced astronomers (amateur and professional) to contribute articles on astronomical topics
- Organize and proofreading all submitted articles
- Publish newsletters quarterly