

WAN, Ching Pui

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Education

Hong Kong University of Science & Technology

MPhil in Computer Science and Engineering – GPA: 4.0/4.3

Sep. 2019 - Aug. 2021

- Thesis: *Robust Federated Learning with Attack-Adaptive Aggregation*
- Best paper award in FTL-IJCAI'21 Federated Learning workshop
- Supervisor: Prof. Qifeng Chen

Hong Kong University of Science & Technology

B.Sc in Mathematics and Computer Science – GPA: 3.9/4.3, First Class Honors

Sep. 2015 - Aug. 2019

- Highlight coursework: Algorithm, Software Engineering, OOP, Probability, Statistical Inference, Analysis

ETH Zürich

Exchange program – GPA: 5.3/6.0

Sep. 2018 - Jan. 2019

- Highlight coursework: Deep Learning, Advanced Machine Learning, Computer Vision

Experience

Hong Kong University of Science & Technology

Teaching assistant – UG OOP course & PG AI course

Feb. 2020 - Dec. 2020

- Delivered a tutorial on C++ STL, designed coding assignments on template, operator overloading, friends
- Designed written & coding assignments on perceptron/ search/ MDP/ knowledge representation/ game theory
- Held AI contests on a navigation mission for student to compete

Google LA x Institute for Pure & Applied Mathematics

Research Internship in Los Angeles

Jun. 2018 - Aug. 2018

- Project on “Extreme rare events classification with predicted positive data”
- Developed algorithms for effective classifiers ensemble on limited training samples
- Applied the software developed on advertising security

Microsoft Research Asia x HKUST

Research Internship in Hong Kong

Jun. 2017 - Aug. 2017

- Project on “Efficient Communication in Distributed Machine Learning”
- Implemented distributive machine learning with Microsoft's deep learning framework (CNTK) on C++
- Performed experiments on image classification, recommendation system, and language translation tasks

Competition

BigDatathon, HKUST x Radica

Dec. 2017

First runner-up, Best Entrepreneur Award

- Prototyped a data-driven ranking system for restaurants in Hong Kong
- Performed sentiment analysis on Instagram posts

Projects

Steel Defect Detection with Deep Semantic Segmentation

Course project

Sep. 2019 - Dec. 2019

- Implemented U-net and Context Aggregated Network for semantic segmentation with PyTorch
- Performed experiments on binary cross entropy loss and dice loss

Colorization with Generative Adversarial Network (GAN)

Independent study

Feb. 2019 - Jun. 2019

- Implemented U-net for image style transfer with PyTorch
- Performed experiments on regularizations and conditional discriminators

Voice Spoofing with Machine Learning

Course project

Sep. 2018 - Dec. 2018

- Implemented GAN for voice synthesis on celebrities with PyTorch
- Built voice identification system against generated voice with Gaussian Mixture model

Travel Agent Chatbot

Course project

Sep. 2017 - Dec. 2017

- Built a chatbot on LINE messenger using Java Spring Boot, JDBC and DialogFlow
- Implemented a database management system with Django

Skills

Programming	Python, C++, Java
Deep Learning	PyTorch, TensorFlow, CNTK
Web	Flask, Django, Spring Boot
Human Language	Cantonese, English, Mandarin