

WAN, Ching Pui

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Education

Hong Kong University of Science & Technology

MPhil in Computer Science and Engineering – GPA: 3.9/4.3

Sep. 2019 – Exp. Aug. 2021

- Thesis: *Robust Federated Learning with Attack-Adaptive Aggregation*
- Paper accepted to IJCAI 2021 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 (Swiss Federal Institute of Technology in Zurich)

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

Feb. 2020 - Dec. 2020

- Responsible for two courses: a UG level OOP course, a PG level AI course
- 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 for students to compete in a navigation mission with the AI methods they learnt

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
- Delivered weekly meeting, reports, oral presentation with industrial sponsor from Google LA

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++
- Analyzed criteria for efficient distributed machine learning
- 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 ranking system for restaurants in Hong Kong based on sentiment analysis
- Extracted comments on restaurants from Instagram with Selenium
- Performed sentiment analysis on Instagram posts with Stanford CoreNLP

Projects

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
- Practiced agile with pair programming and weekly sprint planning with Trello

Low-Rank and Sparsity Reconstruction in Data Science

Undergraduate Research Opportunity Program

Sep. 2016 - Dec. 2016

- Implemented text recognition with dictionary learning on MatLab

Skills

Programming	Python, C++, Java, Kotlin
Deep Learning	PyTorch, TensorFlow, CNTK
Data Analytics	Sklearn, pandas, plotly, matplotlib
Web	Flask, Django, Spring Boot
Human Language	Cantonese, English, Mandarin