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

• 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

Lenovo

Decision Intelligence researcher   Sep. 2021 - Current

• Projects on computer vision and reinforcement learning for business intelligence and operation research

• Developed OCR, table extraction, and layout parsing tools for light-weight document image analysis

• Developed neural combinatorial optimization models with deep reinforcement learning

• Delivered POC to industry partners on engineering diagram recognition

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 Enterpreneur 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, MMDetection, OpenAI Gym, ONNX
Data Science	Pandas, scikit-learn
Software engineering	Docker, Git, Github action, Gitlab CI/CD
Web	Flask, Django
Human Language	Cantonese, English, Mandarin