Education

Hong Kong University of Science and Technology

Bachelor of Science, double major in Data Science and Technology¹ and Computer Science² CGA: 3.73/4.3 (First Class Honors)

Hong Kong University of Science and Technology

Master of Science, Big Data Technology CGA: 3.91/4.3

Skills

Programming languages: Python (Numpy, Pandas, Scikit-learn, PySpark, Matplotlib, etc.), R, SQL, MIPS Deep learning frameworks: PyTorch, Tensorflow Web development frameworks: Django Languages: Mandarin (native), English (fluent), Cantonese (conversational)

Professional Experience

Bloomberg

Bloomberg Academy (Data) Trainee

- Learnt basic commands of the Bloomberg terminal.
- Led a 2-day project to build an ESG score evaluation model using multiple data sources, where Pandas was used to cleanse, transform, and combine multiple datasets.

Tencent

NLP Engineer Intern

- Participated in the AI game companion project in *Honor of Kings* and developed core modules to parse game state data to facilitate LLM fine-tuning.
- Researched and developed an LLM-based system for large-scale bot response generation which supports character-specific generation to enrich user experience.

Smart Sensing Lab, HKUST

Edge AI Developer Intern

- Developed and maintained a real-time human pose detection and tracking algorithm based on YOLO and ST-GCN, and deployed it on edge devices such as Nvidia Jetson Orin and Orange Pi 5B.
- Implemented a demo web application to display detected skeleton and predicted action log in real time using the Django framework.
- Extended the project to a multi-camera setup, and produced detailed documentations on prerequisites and running configurations of the project.

Project Experience

Visual Word Sense Disambiguation

- Tackled the SemEval-2023 Task 1, the visual word sense disambiguation problem.
- Proposed and implemented a novel CLIP-based VWSD system utilizing multimodal information from external knowledge bases, where Transformer encoders are adopted to fuse multimodal representations.
- Extracted key insights on the design of VWSD system architecture.

Report:

Zhuohao Yin, Xin Huang, "HKUST at SemEval-2023 Task 1: Visual Word Sense Disambiguation with Context Augmentation and Visual Assistance" (arXiv)

Real-time Parking Vacancy Detection System Using Fisheye Cameras

Supervisor: Prof. Gary Shueng Han Chan, HKUST

- Built a vision-based real-time vacancy detection system for smart parking lots using fish-eye cameras.
- Implemented image calibration algorithms on distorted fish-eye images and incorporated the YOLOv5 object detection algorithm into our detection pipeline.
- Developed a demo web application, which displays the real-time vacancy status of each parking space for drivers to locate the vacant parking spaces.
- Won the **best FYP** award in the year 2022-23. Details can be found here.

Sep. 2019 - Jun. 2023 Hong Kong

Sep. 2023 – Jan. 2025 Hong Kong

Apr. 2024 - Oct. 2024

Shenzhen

Hong Kong

Jun. 2024

Hong Kong

Jun. 2023 - Sep. 2023

Oct. 2023 - Dec. 2023

Jun. 2022 - Jun. 2023 Final Year Project (Group)

Zhuohao Yin

♥ thomas-yin.github.io

Research Experience

Analysis and Understanding of User Behaviors in Online CommunitiesFeb. 2021 – Jan. 2023Supervisor: Prof. Xiaojuan Ma, HKUSTUndergraduate Research Assistant

- Cleansed user activity data on Reddit and computed key statistics using the \mathbf{Pandas} library.
- Fine-tuned the event-finding algorithm to identify high volume of user activities (posts, comments, and replies) within communities, which are strong indicators of relevant events of interest.
- Conducted a comprehensive and detailed literature survey and drafted the *Related Work* section of the paper, leading to a publication in **CSCW 2023**.

Publication:

Qingyu Guo, Chuhan Shi, <u>Zhuohao Yin</u>, Chengzhong Liu, Xiaojuan Ma, "Exploring the Effects of Eventinduced Sudden Influx of Newcomers to Online Pop Music Fandom Communities: Content, Interaction, and Engagement", in *Proceedings of the ACM Conference on Computer-Supported Cooperative Work and Social Computing* (<u>CSCW 2023</u>)

Honors & Awards

• Entrance Scholarship for MSc BDT Program 2023-24, HKUST	Jun. 2023
• HKUST Best FYP Award 2022-23, Department of Computer Science & Engineering, HKU	ST Jun. 2023

Dean's List, School of Science, HKUST
Jun. 2023 & Jan. 2023 & Jan. 2021 & Jul. 2020
University's Scholarship Scheme for Continuing Undergraduate Students, HKUST
Dec. 2021 & Dec. 2020