Zhuohao Yin

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Education

Hong Kong University of Science and Technology **Sep. 2019 – Jun. 2023**
Bachelor of Science, double major in Data Science and Technology[1] *and Computer Science*[2] *Hong Kong*
CGA: 3.73/4.3 (First Class Honors)

Hong Kong University of Science and Technology **Sep. 2023 – Dec. 2024**
Master of Science, Big Data Technology *Hong Kong*
CGA: 3.813/4.3

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 **Jun. 2024**
Bloomberg Academy (Data) Trainee *Hong Kong*

- 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 **Apr. 2024 – Oct. 2024**
NLP Engineer Intern *Shenzhen*

- 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 **Jun. 2023 – Sep. 2023**
Edge AI Developer Intern *Hong Kong*

- 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 **Oct. 2023 – Dec. 2023**

- 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 **Jun. 2022 – Jun. 2023**
Supervisor: Prof. Gary Shueng Han Chan, HKUST *Final Year Project (Group)*

- 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.

Research Experience

Analysis and Understanding of User Behaviors in Online Communities **Feb. 2021 – Jan. 2023**

Supervisor: Prof. Xiaojuan Ma, HKUST *Undergraduate Research Assistant*

- Cleansed user activity data on Reddit and computed key statistics using the **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, **Zhuohao Yin**, Chengzhong Liu, Xiaojuan Ma, "Exploring the Effects of Event-induced 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* (CSCW 2023)

Honors & Awards

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