Zongmin Zhang
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Education Background

- City University of Hong Kong — Hong Kong

MSc in Computer Science (Current GPA: 3.16/4.3) — Aug. 2022 – Present

- The University of New South Wales — Sydney, Australia

BSc in Computer Science – DataBaseSystems (GPA: Credit/ Second Class Honor) — Aug. 2018 - Sep. 2021

Work Experiences

- Hong Kong Institute of Science & Innovation, Chinese Academy of Sciences (CAIR) — June.2023 – Aug.2023

Vision Algorithm Intern

- Working on finetuning a medical language model using a base model LLaMA-33B and building an external medical knowledge base on our medical language model.
- Working on detecting the multi-label abnormals on the endoscopy images and using the YoloV5 as a base model to train it, try to use the transformer model to improve the performance.

- Research Assitant in CityU — Sep.2022 – June.2023

Supervisor: CityU - Prof. Antoni B. Chan

- Working on a Plagiarism Detection System project.
- Developed basic features for the system's backend (Python Flask) and front end (React).
- Refined the detection model (Fast RCNN) and processed data to improve accuracy.

- Beijing Sankuai Online Technology Co., Ltd. (known as Meituan) — Feb. 2021 – Aug. 2022

System Development Intern

- Developed a Java SpringBoot-based reporting system.
- Conducted essential backend development tasks, including writing scheduled tasks and handling business logic in the Controller and Service layers.
- Participated in project iterations, functional development, and debugging tasks, mainly responsible for data monitor functionality.
- Created and maintained unit and integration tests for new and existing functions.
- Provided daily maintenance for the model transformation service and addressed data platform alarms.
- Access to dialogue robots to realize simple business information query functions.

Selected Academic Projects

- Question Generation — May 2023 – Apr. 2023

- Fine-tune pre-trained models like T5 and BART for a downstream NLP problem, ‘question generation,’ and apply multi-task learning and pointer networks into models. Achieve approximately 22 points in BLEU-4 on SQuAD and 18 points in SQuAD NQG datasets.

- Classify-14-different-Simpsons-Characters (link) — Jul. 2021 - Aug. 2021

- Created a model refined based on the VGG structure model using PyTorch that classified 14 Simpsons characters from grayscale images.

- Utilized neural networks, data pre-processing, and feature engineering to achieve a 93% recognition rate after training.

➢ BookIt (link) May 2021 - Jul. 2021

- Developed a one-stop platform for booking resources, featuring a Python Flask backend, local MySQL storage, and using HTML, AJAX, and CSS as frontend.
- Implemented backend functionality and improved corresponding frontend pages.
- Realized essential features like booking, commenting, liking, favoriting, and resource management.

➢ Signature Index (link) Mar. 2021 - Apr. 2021

- Implemented a signature-indexed file in C, including creation, insertion, and partial-match retrieval query functionality.
- Developed two signature algorithms and a hash function for accurate database Select operations.
- Achieved 80% accuracy in data insertion and retrieval.

➢ Dungeon Game (link) Jun. 2020 - Aug. 2020

- Developed a Java and JavaFX-based dungeon-style side-scrolling game with player movement, item pickup, enemy combat, and level progression.
- Implemented player movement, enemy AI, and item functionality using Java and improved the front end using JavaFX.
- Completed self-designed maps, monsters, and items.

Research Projects

➢ AI in Fintech Jan. 2023 – July 2023

Supervisor: CityU - Dr.Linqi Song

- Working on a Financial Machine Translation project aimed at document-level machine translation in the financial sector.
- Try some large language pre-trained models like mBart-large, mBart-base, mT5-base, and LLaMa with different sizes of tokenizers and decoder strategies to get the SOTA performance in machine translation in the financial area.
- Responsibilities include fine-tuning the model's performance and testing different parameters for the best performance. Developing decoding strategies, like nucleus sampling, beam search with A* algorithm, and reweighting attributes for various financial and general situations to improve machine translation performance.

Additional Information

- Know MySQL, Java, React, Python
- Know about SpringBoot, MyBaits, MapReduce, and Flask.
- Good at back-end programming.