Wyett “Huaye” Zeng

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Education

University of Waterloo & Wilfrid Laurier University — Waterloo, Canada
Bachelor of Computer Science and Business Administration (Major Average 94.8 / 100) — Sep 2020 – Aug 2025
Artificial Intelligence Specialization + Finance Concentration

Work Experiences

Quantitative Developer | Boosted.ai — Jan 2024 – Apr 2024

- Rewrite the factor model algorithm which reduces 10,000+ customer models’ daily inference time by over 90%. The algorithm uses **numpy, Clickhouse, and PostgreSQL** to efficiently compute economic factor values for **every publicly listed security and ETF** each day.
- Developed the investment style matching feature facing 1000+ institutional clients using **Python, gRPC, and protobuf**. The feature analyzes client’s portfolios and reports the fitness of their selected investment style.
- Added features in the **Boosted.ai trading algorithm** to optimize daily stock selection for all the company’s clients. The added features expand the algorithm’s capabilities to construct portfolios that align closer with the client’s needs.
- Developed the **AI commentary features** facing 1000+ institutional clients which use the power of **large language models (LLMs)** to comment on the clients' portfolios against various macro topics.

Data Scientist | CIBC – Gallant MacDonald — Jan 2023 – Apr 2023

- Developed the quantitative portfolio builder, which can construct a portfolio whose return is within **±3% of the desired return** using **QSolver** to provide insight into the more “obscure” alternative investment hedge funds.
- Developed the market analysis automation report that presents hundreds of market trend graphs to team members in less than 3 minutes. The algorithm is created with **Morningstar API**, **pandas,** and **Seaborn.**

Research Thesis

LLM Researcher | Supervised by Professor Chen Wenhu & PhD Candidate Jiang Dongfu — Sep 2023 – Present

- CodeDPO (***Lead***, Ongoing): This thesis paper aims to research the potential performance gains on code generation tasks by LLMs after applying direct preference optimization (DPO) techniques. Utilized 50+ pre-trained LLMs to make inferences on 10+ datasets using tools such as **Huggingface Transformers** and **vLLM**. Then create a new reward model based on **PairRM architecture** using Huggingface **transformers** library.
- MFuyu: The research’s objective is to explore LLMs’ ability to reason about multiple images. To achieve this, we fine-tuned the **Fuyu** model using Huggingface **transformers** library to include the following scenarios:
  - Understanding actions in multiple video frames.
  - Understanding differences between images.
  - High-level operations over multiple images.

LLM Researcher | Supervised by Professor Diego Amaya — Sep 2023 – Present

- Wired News & Market Prediction (***Lead***, Ongoing): The thesis paper aims to understand the effects of wired news on the price movements of securities. I annotated each news article in the **Dow Jones News Wires** with data from **Wharton Research Data Service**, identified news that caused major shifts in price movements, and fine-tune LLMs such as **Bert, Mistral,** and **Llama** using **Huggingface Transformers** and **QLoRA** for sentiment analysis.

Skills

- Languages: Java, Python, C++, C, C#, Go, SQL, Bash, JavaScript, HTML/CSS
- Tools: Hugging Face, Pytorch, Protobuf, Scikit-Learn, Keras, Pandas, NumPy, Seaborn, Slurm, gRPC, Protobuf, GraphQL, Clickhouse, PostgreSQL, REST API, Argo, Postman, Git, SVN, Jenkins, Tableau, Android Studio, React