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

Summary of Qualifications

- **Actively running a $200,000 portfolio** in public equity and fixed income for my parents; risk is managed through diversification in asset classes and geographical allocations. Currently, the NA portfolio has a **25.83% IRR**.
- Experienced in writing **high-performing code** that **analyzed 50+ trillion data points** on market data to produce meaningful analysis that provides insights into both macro and micro topics.
- Strong quantitative analytical skills in **Python, SQL**, **R**, **Tableau**, and **Power BI**. Experienced with **data science packages** such as **PyTorch, Keras, Pandas, Seaborn**, and **Numpy**. Knowledgeable in database system such as **Clickhouse, PostgreSQL**, and **MySQL**.
- Experienced in carrying out qualitative **fundamental analysis** in public equities, fixed income, derivatives, and alternative investments.

Experiences

Quantitative Developer | Gradient Boosted Investments Inc. Jan 2024 – Apr 2024

- Rewrite the factor model algorithm which reduces 5,000+ customer models' scheduled inference time by over **90%,** with **weekly 500+ hours** less computation time on AWS EC2. The algorithm uses **numpy, Clickhouse, and PostgreSQL** to efficiently compute economic factor values for **every publicly listed security and ETF** (20,000+ securities) each day.
- Added features in the **Boosted.ai trading algorithm** with GraphQL 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 **create textual analysis** on the clients' portfolios against various macro topics.

LLM Researcher | Wilfrid Laurier University Sep 2023 – Aug 2024

- **Leading a thesis paper** on applying LLMs to market sentiment predictions on market news. In contrast to previous research, this paper will take a deeper dive into the technical aspects of LLMs in hopes of improving accuracy against even the highest-performing general-purpose model such as ChatGPT4.
- Created a new dataset based on **Dow Jones News Wires** and **Wharton Research Data Service** with 120,000+ entries.
- Finetuned existing LLMs such as **Bert, Mistral,** and **Llama** using **Huggingface Transformers, DeepSpeed,** and **LoRA** for sentiment analysis on the newly created dataset mentioned above.

LLM Researcher | University of Waterloo Sep 2023 – Aug 2024

- **Leading a thesis paper** on applying direct preference optimization (DPO) to create a new reward model for code generation tasks.
- Created a new reward model by **fine-tuning** the pairwise reward model architecture with **DeepSpeed** and **LoRA** on a newly curated preference dataset with 250,000+ entries for intent alignment.
- Utilized 50+ pre-trained LLMs to make inferences on 10+ datasets using **Huggingface Transformers** and **vLLM**.

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

- Developed the **quantitative portfolio builder**, which can construct a portfolio whose return is within **±2.8% of the desired return** using **QSolver** to provide insight into the more "obscure" alternative investment hedge funds.
- Developed the market analysis 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.**
- Partook in numerous due diligence meetings with portfolio managers from big hedge funds such as TCC, Group RMC, and Hamilton Lane. After the meeting, produced a detailed report identifying areas of concern such as **liquidity options, distribution schedule, market correlation, fx risks, and interest risk.**