BOHAN SHU

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EDUCATION

Georgia Institute of Technology — **Atlanta, GA**
Master of Science in Quantitative and Computational Finance — *Expected Dec. 2025*

University of Michigan (Dual Bachelor's Degree Program) — **Ann Arbor, MI**
Bachelor of Engineering in Computer Science, GPA: 3.77/4.00; Minor: Mathematics — *May 2024*

Shanghai Jiao Tong University (Dual Bachelor's Degree Program) — **Shanghai, China**
Bachelor of Engineering in Electrical and Computer Engineering — *August 2024*

EXPERIENCE

GF Fund Management Co., Ltd. — **Guangzhou, China**
Quantitative Researcher Intern — *Dec. 2023 - Present*

- Established a **dividend prediction model** in the A-share market, utilizing **MySQL** to extract data from Datayes! and employing **NumPy** to build a framework for analyzing company dividend patterns. Effectively avoided **high dividend traps** and constructed a stock selection portfolio that outperformed the CSI Dividend Index's annual return by **3.7%**.
- Enhanced the **Risk Parity Portfolio Allocation Model** using **Principal Component Analysis (PCA)**, and employed the **BackTrader** framework in **Python** for backtesting, leading to a **3%** increase in returns.
- Constructed an investment portfolio with A-share equities linked to commodities to replicate the **CRB Index**, and used **Python** to calculate the **correlation coefficient** for evaluating the portfolio's tracking accuracy.

Northeast Securities Co., Ltd. — **Shanghai, China**
Quantitative Analyst Intern — *May. 2023 - Aug. 2023*

- Framed **6** valid A-share **daily alphas** using self-developed **pandas** and **numpy** based backtesting framework, achieving **Sharpe ratios over $\geq$3** with **turnover under 50**% for momentum, turnover, and volatility strategies.
- Developed a **Genetic Algorithm-based** factor mining framework using the **GPlearn** library for automatic factor mining on daily frequency A-share price-volume data, with IC value employed as the fitness function.
- Utilized **Tushare** API in **Python** to retrieve close price data for diverse assets, and applied filtering criteria based on specific close price and historical volatility thresholds to generate a pool of selected assets.

MaxNorm LLC — **Jersey City, NJ**
Quantitative Developer Intern — *Feb. 2023 - May. 2023*

- Built a decentralized cryptocurrency trading bot using **JavaScript**, integrating with **Polygon chain** and **Uniswap exchange** to enable seamless transactions.
- Implemented a **trend-following strategy** between two cryptocurrencies within the liquidity pool, enabling automatic selling when prices increased and buying when prices decreased.

PROJECT

Strategic Reasoning Group, University of Michigan — **Ann Arbor, MI**
Agent-based Market-simulator Implementation in C++ — *Sep. 2023 - 12. 2023*

- Designed the Fourheap data structures for auto matching buy orders and sell orders, and integrated it into the marketsim platform's limit order book, markedly enhancing its efficiency in processing and handling multi-unit orders.
- Collaborated on the development and rigorous testing of the interface bridging marketsim with off-the-shelf **reinforcement learning** algorithms, aiming to optimize algorithmic trading strategies.

College of Engineering, University of Michigan — **Ann Arbor, MI**
Deep-learning-based Multi-modal Fusion with Humor Semantics — *Feb. 2023 - Apr. 2023*

- Developed and implemented an **Attention-based Multi-modal Fusion** with **Humor Theory model** for meme humor classification in **PyTorch**, leveraging both **text and image embeddings** to detect humor in memes.
- Utilized the **Memotion 2.0 dataset** and preprocessed the dataset by extracting text using **Google OCR system**, enhancing image quality, and **fine-tuning RoBERTa** to achieve a final embedding of 768D.
- Conducted extensive **hyperparameter tuning** and evaluation on the Memotion dataset, outperforming the published best model which used the Bert model by **1.3%**.

TECHNICAL SKILLS

Programming Languages: C/C++, Python, Matlab, SQL, R, Stata, Javascript, Typescript, Solidity, Java
Tools: Git, Jupyter Notebook, Linux, Docker, Bash, Sklearn, PyTorch, LaTeX