YUHENG (FITZ) WANG

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EDUCATION

NEW YORK UNIVERSITY, New York, NY The Courant Institute of Mathematical Sciences

M.S. in Mathematics in Finance

• Coursework: stochastic calculus, time series analysis, algorithmic trading, market microstructure, fixed income models

SOUTHEAST UNIVERSITY, Nanjing, China **B.Econ. in Financial Engineering**

EXPERIENCE

HERMES CAPITAL, New York, NY

Quantitative Research Intern – Commodity Trading Advisor

- Developed WGAN-GP and LSTM models with self-attention mechanism and class-balanced Focal Loss to predict minute-level Hurst Exponential on crude oil future contracts
- Achieved over 75% accuracy, precision, and recall in predicting Hurst value, which had 67% accuracy in predicting market regime as trend indicator for 5-10 minute horizons
- Engineered minute-level crude oil strategy execution system for live trading, featuring asynchronous communication among • strategy and multiple database and broker servers
- Optimized data processing and network communication to generate trading signals and execute orders within 100 msec

KAFANG TECHNOLOGY, Shanghai, China

Quantitative Research Intern – High Frequency Trading

- Constructed high-frequency factors based on limit-order book data to quantify buy-sell strength with 2 tick-level factors, improving 2- and 5-second price predictions by 1% compared to benchmark measured by XGBoost R-square
- Developed data processing tools that detected price, volume, and timestamps anomalies of daily tick-level commodity • market data; streamlined data preparation for backtesting and trading systems

CAUSIS INVESTMENT, Wuhan, China

Ouantitative Research Intern – Commodity Trading Advisor

- Designed trend trading strategy for 13 steel, energy, and chemical future contracts on Chinese markets; leveraged supply chain relationships and technical indicators that detected overall supply chain trends and individual asset movements
- Backtested strategy, resulting in 40% annualized return and 2.1 Sharpe ratio, and integrated it into Causis' portfolio

HUATAI SECURITIES, Shanghai, China

Quantitative Research Intern – Stock Trading Strategy

 Created GAN that predicted minute-level CSI300 index constituent stock log-returns with over 65% directional accuracy and average 0.04 RMSRE in multiple backtesting setups, which was 60% lower than models like ARIMA, SVM, and LSTM

EXTRA-CURRICULAR PROJECTS

Implementation of Distributed File System with gRPC (C++)

- Architected distributed file system using C++ and gRPC, featuring whole-file caching, writer locks, and real-time multi-client synchronization through dual-threaded client architecture with inotify and asynchronous notifications threads
- Developed thread-safe server infrastructure to handle concurrent client requests with asynchronous bi-directional communication, enabling automatic propagation of changes across networked clients

Implementation of Multi-Process HTTP Proxy System with Caching (C)

- Architected dual-process system with proxy server that handled client requests and cache server that managed file retrieval; used POSIX shared memory for file transfer and message queues for file lookup coordination
- Implemented boss-worker multithreading pattern across client, proxy server, and cache server processes, optimizing concurrent request handling; achieved 428% throughput improvement with 947.5 requests/sec under high load Jul 2024 – Aug 2024

DistilBERT-based Transformer Adapter on Text Classification Tasks (Python)

- Engineered adapter fusion technique, integrating pre-trained adapters from various semantic classification tasks with DistilBERT for IMDB dataset classification, demonstrating effective transfer learning
- Achieved near SOTA accuracy (94%) with reduced training overhead (~30%) compared to full transformer fine-tuning

SKILLS

Programming Languages and Tools: Python (advanced), C++ (advanced), C (proficient); Git, Linux, Make, GDB Languages: English (fluent), Chinese (native)

Aug 2018 – Jun 2022

Jun 2024 - Aug 2024

Sep 2021 – Jan 2022

Jul 2022 - Nov 2022

Jun 2021 - Sep 2021

Aug 2024 - Oct 2024

Oct 2024 – Dec 2024