HAORAN (CHRIS) OUYANG

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EDUCATION

Expected 12/26	**NEW YORK UNIVERSITY** New York, NY

The Courant Institute of Mathematical Sciences
M.S. in Mathematics in Finance
- *Expected Coursework*: deep learning, stochastic analysis, portfolio management, asset pricing

09/21 - 06/25   **RENMIN UNIVERSITY OF CHINA**   Beijing, China
Dual B.S. Degrees in Mathematics and Finance
- *Coursework*: regression analysis, real analysis, functional analysis, PDEs, numerical methods, stochastic processes, deep learning, corporate finance, quantitative investment
- *Honors*: Grand Prize Scholarship for Academic Excellence (#1 in Major, Consecutively for 3 Years)

EXPERIENCE

11/24 - 04/25   **ALLIANZ ASSET MANAGEMENT**   Beijing, China
Quantitative Research Intern (Python, R)
- Built real-time updating library of 120 alpha factors with information coefficients (IC) more than 0.03 for index futures timing based on macro indicators, microstructure signals, and tick-level data
- Developed system integrating numerous database APIs, supporting dynamic data calls
- Built modular backtesting and risk evaluation framework from scratch, tailored for index futures timing strategies; integrated IC analysis, signal decay, risk premia estimation, and portfolio simulation
- Optimized GRU-based models for alpha signal generation by tuning forecast horizons, turnover constraints, and risk-neutralization methods; enhancements led to Sharpe ratio of 2.7 in backtest

07/24 - 11/24   **SHANGHAI REDWALL TAIHE FUND MANAGEMENT**
(A-share focused quantitative fund with more than $700M AUM)   Beijing, China
Quantitative Research Intern (Python)
- Explored over 50 microstructure-based alpha factors from tick-level data, capturing order imbalance and trade size signals to exploit short-term price pressure
- Applied XGBoost and neural networks with custom loss functions tailored for alpha factors generation, and accelerated training with multiprocessing for parallel computation
- Built supply chain weight matrix using inter-company transaction data, integrating upstream/downstream dynamics to propagate fundamental shocks across related firms: average improvement of 1.5% in daily IC
- Forecasted PM-session excess returns using LSTM and MLP with daily/intraday factor inputs

06/24 - 07/24   **BEIJING JIAWO ASSET MANAGEMENT**
(A-share focused quantitative fund with more than $700M AUM)   Beijing, China
Quantitative Research Intern (Python, DolphinDB)
- Researched high-frequency alpha signals with DolphinDB (time-series database supporting SQL- and Python-like scripting) based on order book data
- Analyzed and enhanced weak signals by applying neutralization, restricting data to intraday windows, and analyzing cross-factor interactions under different market regimes
- Created new composite factors using weighted aggregation or machine learning to maximize IC and extended factor-construction logic from low-frequency data to high-frequency data

PROJECTS

01/25 - 04/25   **RENMIN UNIVERSITY OF CHINA**   Beijing, China
Dissertation: Deep Learning-Based Timing Strategy for Stock Index Futures (Python)
- Built return forecasting models using more than 150 daily spot-futures factors with hybrid deep learning architectures, achieving optimal performance through hyperparameter tuning
- Developed futures trading strategies using prediction outputs and conducted backtest; achieved a 2.25 Sharpe ratio in backtesting CSI 300 futures strategy

COMPUTATIONAL SKILLS / OTHER

Programming Languages: Python, C, R, DolphinDB
Languages: English (fluent), Mandarin (native)
Activities: First Prize in National High School Mathematics League, Directed choir to win Gold in campus-level contest