Junyuan Liu

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EDUCATION

The University of Chicago — **Chicago, IL**
Master of Science in Financial Mathematics — **Expected December 2025**
- Courses: Portfolio Theory & Risk Management, Quantitative Trading Strategy, Option Pricing

Wuhan University — **Wuhan, China**
Bachelor of Science in Mathematics and Finance(GPA: 3.83/4.00) — **June 2024**
- Courses: Probability Theory, Mathematical Statistics, Ordinary Differential Equations, Stochastic Process, Stochastic Analysis, Real Analysis, Python, Matlab, Investments, Options, Futures and Other Derivatives
- Awards: Top 10% Honors; Wuhan University Outstanding Student Award

SKILLS

Computing: Python, C, C++, Stata, R, Matlab, LaTex, MS Office
Knowledge: Financial Markets, Machine Learning, Statistical Modeling, Data Analytics, Data Crawling, Econometrics
Trading Products: Futures, Commodities, Fixed Income, Equities, Options, Cryptocurrencies

EXPERIENCE

Sinolink Securities — **Shanghai**
Data Analytics Intern — **October 2023 - January 2024**
- Crawled data of listed companies and performed data cleaning, analysis, and database entry using Python and SQL
- Analyzed major industries, such as BeiDou satellite and storage sectors, providing insights into industry landscapes, value chains, market dynamics, and key enterprises for strategic decision-making
- Used Python for web scraping, extracting articles from the WeChat platform and data from various web pages

Goku Technology — **Shanghai**
Quantitative Research Intern — **June 2023 - September 2023**
- Analyzed research reports on quantitative finance and journals related to quantitative strategies; used C++ and Python to develop volume-price and fundamental factors based on 1-minute level data for commodity futures and stocks
- Wrote programs in Python to conduct factor validation, considering factors' half-life, correlations between factors, and statistical properties of individual factors; selected high-quality factors that meet the criteria
- Utilized live trading data for model fitting, incorporated the validated factors into the company's existing benchmark model, and identified factors that demonstrate enhanced performance in the model

TF Securities Co., Ltd — **Wuhan**
Investment Bank Intern — **July 2022 - September 2022**
- Used Wind for enterprise data extraction and conducted due diligence for companies' IPO, refinancing, and spin-off projects, prepared comprehensive reports on primary products, industry outlooks, and competitive strengths
- Analyzed semi-annual financial report for a refinancing project, examined the authenticity of financial statements, and cross-checked financial data in the prospectus

RESEARCH

Volume-Price Multi-factor Stock Selection Strategy Based on Machine Learning — **October 2023 - May 2024**
- Constructed volume-price Alpha factors in Python and conducted a series of single-factor validity tests
- Used Lasso regression, XGBoost, LSTM and other algorithms to build different multi-factor stock selection models, selected stocks according to the forecast stock price increase
- Built integrated stock selection models based on different weighted average methods, verified their better stock selection performance

Reinforcement Learning Based Portfolio Trading Agent — **February 2022**
- Developed an investment optimization model utilizing reinforcement learning and the Markov process, simulating human thought patterns and providing optimal trading strategies based on current asset prices and historical data

ADDITIONAL INFORMATION

Languages: Mandarin (native), English (fluent)
Interests: Violin, Singing, Table tennis, Volunteer work