Jiayi Fan

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EDUCATION

THE UNIVERSITY OF CHICAGO Chicago, IL

Master of Science in Financial Mathematics – Division of the Physical Sciences Expected: December 2022

- **Relevant Coursework**: Portfolio Theory & Risk Management, Portfolio Credit Risk: Modeling and Estimation, Option Pricing, Probability & Stochastic Processes, Computing for Finance in Python & C++, Advanced Computing for Finance, Regression Analysis and Quantitative Trading Strategies, Bayesian Statistical Inference and Machine Learning, Numerical Methods, Corporate and Credit Securities
- **Trading: CME Group Trading Competition** (traded a variety of assets including commodities, futures, options, equities, FX; analyzed market data & reports from equities and futures contracts along with index price changes)

THE UNIVERSITY OF CHICAGO Chicago, IL

Bachelor of Arts in Theoretical Economics (Dean's List) September 2018–August 2021

- **Relevant Coursework**: Statistical Theory & Methods, Multivariable Calculus, Complex Analysis and Differential Equations, Abstract/Numerical Linear Algebra, Computer Science with Applications, Mathematical Probability, Markov Chains & Martingales & Brownian Motion, Applied Regression Analysis, Mathematical Methods for Social & Physical Sciences, Mathematical Optimization, Biostatistical Methods, Econometrics, Elements of Economic Analysis, Game Theory, Managerial Microeconomics, Applied Behavioral Economics, Economic Policy Analysis

SKILLS

Computing: Python, C++, Java, C, Stata, R, SQL, MATLAB, NLP (FinBERT, LDA, TextBlob, etc.), HLM, MS Office
Knowledge: Data Science, Statistical Modeling, Big Data/Deep Data Analytics, Machine Learning, Quantitative Analysis
Trading Products: Equities, FX, Options, Futures, Commodity Derivatives, Fixed Income, Cryptocurrency

EXPERIENCE

NEUBERGER BERMAN Chicago, IL

Quantitative Research Intern – Fixed Income (Big Data) February 2022–April 2022

- Research bonds data with prices and yields to identify Big Data for alpha with high-yield fixed income
- Perform data-processing through NLP (Natural Language Processing) methodologies including BERT Sentiment Analysis (FinBERT, pre-trained on financial text), textual tokenization, and LDA Topic Modeling
- Develop models with statistical and Machine Learning Algorithms (SVM, GBM, AdaBoosting, Random Forest, Neural Network) on Python to predict price momentum shifts, spreads, and returns; test different methods for model improvement including hyperparameter tuning, rolling model, and industry-sector-specific performance analysis

CHANGSHENG FUND Beijing, China

Summer Quantitative Analyst July 2021–September 2021

- Assisted portfolio managers and quantitative researchers in data analysis and reporting of hedge fund performance
- Performed broader portfolio analysis, and identifications and testing of significant factors through statistical modeling
- Engaged in investment research projects to better understand risk factors, risk aversion, and hedging tools in securities margin, options, and index futures; evaluated factor loading of betas based on multifactor models for various assets

CICC (CHINA INTERNATIONAL CAPITAL CORPORATION LIMITED) Beijing, China

Summer Trainee, Financial Engineering June 2021–July 2021

- Performed statistical modeling and analyzed the response of timing model to conditional variables by estimating returns through Random Forest, Logistic Regression, and Support Vector Machine
- Developed comprehensive understanding of Quantamental Investing in value and growth stocks
- Examined how variables such as risk adjusted returns and portfolio volatility affect asset allocation strategies

UNVERSITY OF CHICAGO ITS DATA CENTER Chicago, IL

Data Analytics Intern June 2019–August 2019

- Conducted research on Information Technology Infrastructure Library for IT Release Management
- Performed statistical analysis, data mining, and programming analysis for AI and data science projects
- Documented ITRM processes for a series of UChicago systems and applications

ADDITIONAL INFORMATION

Languages: English (fluent); Mandarin Chinese (native speaker); French (proficient)
Interests: Game theory; Rubik's cube; competitive fencing; competitive sudoku