Tianqi Xiao

Atlanta, Georgia • (470)-815-6763 • *txiao38@gatech.edu*

EDUCATION

GEORGIA INSTITUTE OF TECHNOLOGY **Atlanta, Georgia**
Master of Science in Quantitative Finance and Computational Science & Engineering *Aug 2021–May 2023*

- GPA:4.0/4.0
- Key Coursework: Finance and Investments; Stochastic Processes in Finance I; Design and Implementation of Systems in Computational Finance; Management of Financial Institutions; Data mining & Stat learn; Numerical Methods for Finance

TIANJIN UNIVERSITY OF FINANCE AND ECONOMICS **Tianjin, China**
Bachelor of Economics in Financial Engineering, GPA:3.72/4.0 *Sept 2017–Jul 2021*

- Key Coursework: Probability theory and Mathematical Statistics, Mathematical Finance, Financial Analysis

INTERNSHIP EXPERIENCE

CHINA INTERNATIONAL CAPITAL CORPORATION LIMITED **Tianjin, China**
Position: Analyst Intern /Wealth Management Department *Jan 2021–Jun 2021*

- Established database based on the private funds by SQL, categorized thousands of private funds and conducted weekly visualization analysis.
- Collected weekly data from all sales departments before processing them with Python, analyzed and compared the sales and other data of different regions in Tianjin, generalized the performance and used in the weekly meeting.
- Learned about financial products and business protocols, assisted in selecting portfolios for clients based on derivative and market knowledge; successfully reduced 80% of the whole workload by utilizing Python to automatically process data.

PINGAN SECURITIES **Tianjin, China**
Position: Investment Analyst Intern/Investment Department *June 2020–Aug 2020*

- Obtained and completed the works to use fundamental ratios to predict the stock returns; used MATLAB and investment strategy knowledge to perform portfolio analysis and delivered the presentation.
- Followed up the clients' feedback and analyze the market requirement through thousands of feedbacks, created customer portrait to match users with appropriate stock and fund's portfolio, enhancing customer satisfaction.

PROJECT EXPERIENCE

Dynamic Delta Hedging Strategy

- Designed the system to construct the delta hedging portfolio through replicating the value of the financial derivative.
- Tested the veracity of Black-Scholes model by computing the hedging error, profit, etc. with the delta-hedging strategy by using the real market data and analyzed the profit-and-loss performance.

Optimized the Index-tracking Portfolio

- Used random forest to select 10 factors to run linear regression model across all securities to predict returns, track and visualize the benchmark index's performance by forming a portfolio based on expected returns.
- Applied machine learning model including of SVR model and Elastic Net model to optimize the returns, increasing 30% of the cumulative returns and information ratio

Corporate Default Risk Analysis

- Selected explanatory variables related to corporate default from large datasets; applied machine learning methods including Logistic Regression, Lasso and Ridge Regression, KNN, Random Forest, XGBOOST to predict the defaults of more than 1000 companies.
- Compared the result of accuracy score, AUC and KS statistics; the mean prediction accuracy of the models is about 65%

Event studies and sentiment analysis

- Crawled more than five thousand 8-K documents from SEC and computed cumulative abnormal returns around 8-K filings dates using CAPM and Fama-French 3-factor models.
- Analyzed tone of sentences tokenized from 8-K filings using NLTK package by measuring levels of positivity or negativity and further analyzed the relationship of cumulative abnormal returns and different quintiles of sentiments.

Construct Alternative Indexing Mechanism to Market Capitalization Weighted Index

- Used different respective fundamental variables or market variables such as Idiosyncratic volatility calculated through regression under different models as the weight to construct various portfolios.
- Compared the performance of different portfolios based on indexes like volatility and kurtosis of returns with the market's return, sharpe ratio and information ratio, got the top ones and observed their returns vary with business cycle.

SKILLS

Programming: Python, C++, MATLAB, R, SAS, SQL, Tableau, Java, MS Office Suite
Certifications: Data Science Fundamentals with Python and SQL Specialization (IBM), R Programming (JHU)
Awards: Innovative Award in Scientific Research of Tianjin U of Fin & Ecos (Less than 1% of the University)