Zien Lyu

zl428@cornell.edu 915 E State Street, Ithaca, NY 14850 cell: 607.280.9160

EDUCATION

Cornell University, College of Engineering, Ithaca, NY
Master of Engineering in Financial Engineering, **GPA: 4.1** **Expected December 2022**
Financial Data Science Certificate (FDSC)

Nanjing University, Nanjing, China
Bachelor of Economics in Finance, **GPA: 4.6/5.0** **June 2021**

Exchange Program at **University of California, Berkeley** and Summer Session at **Duke University, GPA: 4.0** **2019 and 2020**

Selected Coursework: Operations Research Tools for Financial Engineering, Monte Carlo Simulation, Fundamentals of Machine Learning, Big Data Technologies, Statistical Data Mining, Investment and Portfolio Management, Optimization Modeling in Finance

SKILLS & CERTIFICATES

Technical: Python (NumPy, Pandas, SciPy, PyTorch, etc), R, SQL, MATLAB, Java, Eviews, Stata, VBA, Bash Scripting
Certificates: Passed FRM (Financial Risk Management) Exam Part I

EXPERIENCE and PROJECTS

Investment Banking Intern, *Kaiyuan Securities,* Shanghai, China *(Remote)* **Feb 2022 to present**
- Assisted in constructing and maintaining code framework written in Python to realize office automation and improve team efficiency, such as identifying image content, managing file directories and some combinations with common software.
- Participated in an on-going IPO project, engaging in prospectus writing, due diligence and verification of financial materials.

Spoken Digit-pair Recognition, *Cornell University* **Nov. to Dec. 2021**
- Employed Python (Sklearn, PyTorch) to recognize pairs of digits from audio clips by extracting amplitudes from the spectrograms as features and constructing machine learning models, using both traditional methods (SVM, decision trees, logistic regression) and deep learning methods (NN, CNN), finally achieving accuracy of 0.954 for test data.

Pairs-trading Strategies Using R, *Cornell University* **Nov. to Dec. 2021**
- Employed R to choose pairs from stocks in the bank industry, discovered stock pairs according to both the distance method and cointegration analysis and implemented the strategies of pair trading.

Quant Researcher Intern, R&D Department, *China Industrial Futures Limited,* Shanghai, China **July to Aug. 2020**
- Employed Python to process 1 mil records commodities futures price data. Utilized statistical methods such as ADF test and co-integration analysis to analyze futures data and implement calendar-spread strategies for copper.
- Applied vector autoregression (VAR) and IVX regression to explore relationships between fundamental factors and return for iron ore futures. Constructed prediction models and designed quantitative strategies. Back-testing achieved Sharpe ratio 1.58 for out-of-sample data, with maximum drawdown -16.8%.

Institutional Investor Networks and the Risk of Stock Price Collapses, *Nanjing University* **Sep. to Nov. 2019**
- Built institutional investor networks using Python based on their stock positions and constructed network indicators. Employed Stata to analyze the impact of network indicators on stock price collapses through panel data regression and explore the influence mechanism via mediation test.

Finance Intern, Finance Department, *Xinghua Jiebang Import and Export Trade Co., Ltd,* Xinghua, China **June to Sep. 2018**
- Employed Excel/VBA to manage and visualize financial data. Attended in meetings with banks to present capital solutions.
- Assisted in risk management and preparing proposals for banks on cost/benefit analysis and pricing/profitability models.

LEADERSHIP EXPERIENCE

Outreach Officer, *Financial Engineering Association of Nanjing U.* **Sep. 2019 to June 2021**
- Managed external relations and successfully negotiated sponsorships. Organized 10+ workshops about quantitative trading.

Volunteer Leader, *Youth Volunteers Association of Nanjing U.* **Sep. 2017 to June 2018**
- Recruited 20+ volunteers and organized activities like teaching and mental health counseling to support children in need.

ACTIVITIES/INTERESTS

Activities/Interests: Singing; the electronic organ (10/10 level); travel