Xihao (Molly) Zou

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Education

Boston University, Questrom School of Business, Boston, MA — Jan 2024

M.Sc. Mathematical Finance & Financial Technology

- **Selected courses:** Stochastic Calculus, Fixed Income, Algorithmic Trading, Financial Econometrics, Accounting Risk Management, Corporate Risk Management, Economics of FinTech, Machine and Deep Learning

Case Western Reserve University, Cleveland, OH — Jan 2022

B.Sc. in Applied Math, Second major in Finance

- **Selected courses:** Linear Algebra, Fundamental of Analysis, Computational Economics, Empirical Analysis in Finance, Fin Model Analysis and Decision, Cases in Finance, Actuarial Science, Management Accounting

Skills and Credentials

Programming: R, Python, C++, SQL, MATLAB, Java, LaTeX, Origin, SAS, Mathematica, Microsoft Office 365
Languages: Mandarin, Cantonese, English

Experience

UmpScores, Boston, MA — May 2023 - Aug 2023

Data Analytics Intern

- Improved analytics, tools, and graphics around a sports analytics startup by analyzing umpires' scorecards
- Tested different hypotheses about potential factors influencing bad call ratio using Python and regression models

Skyco International Financial Leasing. Ltd, Guangzhou, China — Mar 2022 - Jun 2022

Accountant Intern

- Performed biweekly bank reconciliations; maintained and controlled domestic/global aircraft leasing
- Implemented ongoing compliance requirements; assisted with requests and inquiries from the external audit team

Public Venture Capital, Guangzhou, China — May 2021 - Jul 2021

Analyst Intern

- Conducted due diligence on start-ups, including product designs/financial statements, for investment opportunities
- Interviewed 10+ start-up companies and prepared company presentation for management

Projects

Boston University, Questrom School of Business MSMFT – Credit Risk — Fall 2023

Mutual Fund Style Classification from Prospects Forecasting Distance to Default with KMV Model

- Calculated 6 US banks' default distances from 2010 to 2022 using the KMV model
- Ran a regression with DD using 5 variables (ROE, DAR etc.) and compared MSE with 6 other models to build a trading strategy and perform a back test to get a 3.15% excessive cumulative return

Boston University, Questrom School of Business MSMFT – High Frequency Trading — Spring 2023

Algorithm Trading Simulation

- Traded US stocks in a paper account for 3 months period starting with $100,000
- Tracked performance using momentum strategy to multi-factor strategy to LightGBM with Bollinger Bands width

Case Western Reserve University, Department of Math – Senior Project — Spring 2023

Rational vs. irrational decisions: Insights from game theory

- Studied different scenarios of two players games, such as prisoner's dilemma and hawk/dove game
- Simulated a spatially distributed game by plotting how 8 combinations of 3 neighbors affects the strategy of the middle player; modified the payoff matrix and compared the outputted different winning strategies