

PAUL ZHANG
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EDUCATION

University of Michigan, Dept. of Mathematics

Ann Arbor, MI

Master of Science in Quantitative Finance and Risk Management

Aug. 2023 – Apr. 2025 (Expected)

- **Cumulative GPA:** 4.0
- **Coursework:** Stochastic Process, Brownian Motion, Stochastic Calculus, Arbitrage Theory, Advanced Probability Theory, Time Series Analysis, Monte Carlo, Supervised Learning
- **Expected Coursework:** Numeric Methods for PDE; Stochastic Optimization; Deep Learning

Shanghai Jiao Tong University, School of Business

Shanghai, China

Bachelor of Economics in Finance

Sept. 2019 – June 2023

- **Cumulative GPA:** 3.6
- **Coursework:** Algorithmic Trading, Econometrics, Portfolio Theory, Linear Programming, Calculus, ODE, Python, MATLAB, Fixed Income Securities

WORK EXPERIENCE

CITIC Securities

Shanghai, China

Financial Analyst Intern

April 2022 – June 2022

- Modeled cash flow and stock price of 3 pharmaceutical and 2 medical device companies;
- Conducted research on a pharmaceutical R&D service provider that contributed to a business research report;

Guangdong BrandMax Marketing Co., Ltd.

Shanghai, China

Investment Analyst Intern

Oct. 2021 – Jan. 2022

- Segmented 100 investees in company database; generated descriptive statistics and data frames for analysis;
- Analyzed business models of e-commerce service providers on live streaming platforms including TikTok;

PROJECT EXPERIENCE

University of Michigan

Optimally playing Blackjack through Machine Learning

Mar. 2024 – Apr. 2024

- Developed game environment including states, actions, rewards, and utility functions based on python;
- Combined Q-Learning and epsilon-greedy policy to find optimal strategies;
- Generated strategy charts for models with varied hyper-parameters using matplotlib;

Shanghai Jiao Tong University

An Empirical Study of Option Momentum

Dec. 2022 – June 2023

- Applied Fama-MacBeth Regression to at-the-money option straddles in China Market using python;
- Verified short-term momentums over cross-section of straddles and the lack of longer-term reversals;
- Constructed quartile portfolios with varied holding period; realized an 9.5% annual return for the best portfolio;

Algorithmic Trading Research

Nov. 2022 – Jan. 2023

- Constructed and validated the 101 Alphas for stocks in China Market with information coefficient criterion;
- Modeled the next-day stock returns and factor exposures with Decision Tree and Random Forest;
- Improved the annual return by 5% compared with OLS regression; achieved a Sharpe Ratio of 2.8;

SKILLS

- **Python:** Data preprocessing, Regression analysis, Machine learning, Data visualization, NLP;
- **R:** Regression analysis and diagnostics, Time series analysis;
- **MATLAB:** Monte Carlo simulations, Newton's Method, Gradient descent;
- **LaTeX:** Completed over 20 reports with LaTeX