

Ziyang Song

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Education

Columbia University

New York, NY

MS in Financial Engineering

Expected Dec 2024

- Courses: Stochastic Models, Optimization, Monte Carlo Simulation

Georgia Institute of Technology

Atlanta, GA

BS in Mathematics

Aug 2020 - May 2023

- Cumulative GPA: 3.78/4.00; Major GPA: 3.81/4.00
- Dean's List (every term); Faculty Honors (Fall 2021, Fall 2022)
- Relevant coursework: Probability, Statistics, Ordinary & Partial Differential Equations, Numerical Analysis, Machine Learning, Linear Programming, Applied Combinatorics

University of Wisconsin-Madison

Madison, WI

BS in Mathematics

Sep 2019 - May 2020

- Cumulative GPA: 3.827/4.000

Professional Experiences

Ask2.ai

New York, NY

Portfolio Management and Algorithm development Intern

Jun 2024 - Aug 2024

- Developed five new rebalancing triggers, including the Calmar Ratio, Omega Ratio, Kappa Ratio, Skewness, and Kurtosis triggers, and enhanced the effectiveness of five existing triggers across various market periods using Python, providing insights that improved the portfolio's risk-adjusted returns.
- Developed and implemented Weighted Majority Algorithm (WMA) to dynamically select optimal rebalancing triggers for portfolio management based on evolving market conditions, leading to a 6.7% improvement in annual returns during 2011-2019 period.
- Compared performance metrics with previous models, demonstrating improved annualized returns in stable market conditions while maintaining robust performance during volatile periods, reducing rebalancing frequency and transaction costs.

Beijing Chang-Xin Construction & Investment CO., Ltd

Beijing, China

Investment Development Department Intern

Jun 2023 - Aug 2023

- Collaborated with senior management to evaluate renovation projects for over 5 commercial land sites, contributing to strategic discussions on optimizing land use and expanding products for pharmaceutical clinical research companies.
- Analyzed operational approaches, compared financial metrics, and identified strengths and weaknesses to evaluate investment risks and formulate future development strategies.
- Performed polynomial regression analysis on one of invested companies, pinpointing revenue patterns contributed to a 14.86% profit margin enhancement through reducing transportation costs and update sterilization equipment.

Agricultural Bank of China

Beijing, China

Credit Management Department Intern

Jun 2022 - Aug 2022

- Collaborated with a team to evaluate over 400,000 financial statement data provided by industry.
- Collected and analyzed indicators such as credit scores, loan purpose, and recent inquiries from raw data; cleaned and processed over 20 features using Python for feature engineering.
- Assessed financial behavior and forecasted potential loan risks by calculating distributions of critical indicators, including debt-to-income ratio, income fluctuations, and average expenses, based on processed data.

Research Experiences

Nuclear Energy's Role as a Long-Term Solution to Global Energy Needs

Atlanta, GA

Researcher; Instructor: Dr. Matthew Oliver

Oct 2021 - Dec 2021

- Analyzed key challenges of nuclear energy, focusing on implications of nuclear waste storage and environmental impact.
- Evaluated construction costs of nuclear power plants across 15 categories, identifying potential areas for optimization.
- Assessed reliability of nuclear energy applications and predicted economic risks using Expected Utility Theory, gaining insights into the advantages of low operational costs, consistency, and environmental benefits offered by nuclear energy as a sustainable solution.

Skills

- Computer Skills: Python (Pandas, Matplotlib), Latex, SQL, C++