Jordan Cassella

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EDUCATION

The University of Chicago **Chicago, IL**
Master of Science in Financial Mathematics **Expected December 2025**
- Courses: Portfolio Theory & Risk Management, Option Pricing, Python, Probability & Stochastic Processes

Stony Brook University **Stony Brook, NY**
Bachelor of Science in Applied Math & Statistics and Economics (GPA: 3.92/4.0) **May 2024**
- Courses: Quantitative Finance, Probability Theory, Data Analysis (OLS), Time Series Analysis (ARIMA), Numerical Analysis, Linear Algebra, Differential Equations, Data Structures & Algorithms, Artificial Intelligence
- Awards**:** 2023 Academic Achievement Award, University Scholars Honors, Summa Cum Laude Distinction

SKILLS

Computing: Python, Java, R, SQL/ClickHouse, OCaml, Excel VBA
Knowledge: Regression, Time Series, Machine Learning, Object-Oriented Programming, Financial Markets
Trading Products: Equities, Options, Futures, Fixed Income, Commodities, Cryptocurrencies
Teamwork: GitHub, Time Management, Leadership, Collaboration, Clear and Concise Communication
Games: Miracle Sudoku as Logical CSP, Mean Connect 4 agent using Minimax, Tic-Tac-Toe agent using RL

PROJECTS

SBU Research in Applied Mathematics & Statistics **Stony Brook, NY**
Signature Method of Machine Learning in Quantitative Finance **August 2023 – December 2023**
- Implemented non-parametric predictive ML model in Python of mean stock prices using path signatures
- Programmed rolling window utilizing Numpy and Pandas that computes signatures of price data streams, uses them as features to XGBoost model, and predicts mean stock prices of 5-day windows
- Developed trading strategy which selected stocks with strongest signals based on predicted mean prices
- Utilized both long and short positions with universe of over 300 stocks and achieved 1.74 Sharpe ratio
- Communicated research, methodology, and results with a 17-page academic research paper in applied mathematics

SBU High-Frequency Trades and Quotes Research Group **Stony Brook, NY**
Ticker Change and Stock Split Functions **May 2023 – August 2023**
- Developed user-defined functions and queries in SQL/ClickHouse which checked for stock splits and ticker changes designed for high-frequency L1 data
- Returned date, new ticker, and factor of stock split if applicable for given ticker and time window
- Integrated these functions into group's preprocessing pipeline so machine learning models train on accurate data

SBU Research in Economics **Stony Brook, NY**
Quantitative Modeling in Behavioral Finance **January 2023 – May 2023**
- Analyzed effectiveness of explicitly modeling behavioral biases in 20-page position research paper
- Synthesized several methods such as HAM, LLS, and Agent-Based Models
- Measured effect of overconfidence, sentiment, loss aversion, and self-attribution on market dynamics

SBU Data Analysis **Stony Brook, NY**
OLS Regression Projects **January 2022 – May 2022**
- Built OLS regression models in R by merging datasets, cleaning data using bootstrap regression imputation for missing values, binning data points, and using forward stepwise regression for variable selection
- Computed statistical measures like t-tests, F-tests, lack of fit tests, and ANOVA tables ($P < 0.01$)

EXTRACURRICULAR

Commuter Connector for University Scholars **August 2022 – December 2022**
- Mentored freshman economics student by providing advice about studying, registration, and career goals
- Met bi-weekly to create study plans that led to his Dean's List achievement

Teaching Assistant for Introduction to Economics **January 2022 – May 2022**
- Lectured students during final exam review and presented using MS Powerpoint
- Collaborated with other TA's to collect and maintain attendance records using MS Excel
- Led office hours by answering students' questions about macro and micro theory
- Communicated to students via bi-weekly emails providing study plans