

Harrison Jia

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EDUCATION

University of Chicago

Master of Science in Statistics

Chicago, IL

Sept. 2021 – Dec. 2024

University of Chicago

Bachelor of Arts in Economics

Chicago, IL

Sept. 2017 – June 2021

EXPERIENCE

QR Markets Associate Intern

JP Morgan Chase

June 2024 – Aug. 2024

New York, NY

- Worked with the Agency Securities Lending QR team on optimizing pricing for lending rates.
- Improved rate padding predictions by identifying key issues in the scope of data and predicting dividend dates.
- Tested and implemented models to analyze relationships between implied synthetic borrowing and internal borrowing rates, predicting spikes on average a month in advance.

Quantitative Analyst Intern

Magnetar Capital

June 2023 – Aug. 2023

Evanston, IL

- Collaborated with the Quant Equities team to enhance business classification using 10-K business descriptions.
- Applied a refined model, increasing classification power as measured by daily return correlations.

Tactics Intern

SBB Research Group

June 2022 – Sept. 2022

Northbrook, IL

- Conducted statistical analysis to identify optimal entry points for long positions, improving investment decisions using linear regression and machine learning techniques.
- Developed Python and SQL scripts to streamline extraction of options data from the internal database, simplifying team access to data directly from Python.
- Used regression analysis to assess the impact of bond yields and implied volatility on credit default swaps (CDS).

Data Science Intern

Integra Credit

June 2021 – Sept. 2021

Chicago, IL

- Developed an optimized calling priority algorithm, reducing call center costs and improving efficiency in managing outbound calls.
- Collaborated with the analytics and collections teams to evaluate SQL-derived data.
- Built and evaluated logistic regression and random forest models, presenting results to both teams.
- Tested the top-performing model on a week of data, identifying the top 75th percentile of customers most likely to repay debt, outperforming the bottom 25th percentile by a factor of three.

PROJECTS AND RESEARCH

Thesis | *Python, Cuda, Cudnn*

Sep. 2023 – Dec. 2024

- Developing a framework utilizing reinforcement learning techniques to analyze NFL play-by-play data, specifically in imperfect information settings.

Econometrics Paper | *Python, R*

Apr. 2021 – June 2021

- Analyzed drug and alcohol usage after marijuana legalization in pre-2017 legalized states versus non-legalized states using the Difference-in-Differences method.
- Results indicated a significant increase in marijuana usage, while usage of heroin, alcohol, and other illicit drugs showed no significant changes.

AWARDS AND ACHIEVEMENTS

Citadel East Coast Datathon, 3rd place

Mar. 2022 – Apr. 2022

IMC Trading Prosperity Trading Competition, 30th/7000+

Mar. 2023

IMC Trading Prosperity Trading Competition, 10th/10K+

Apr. 2024

TECHNICAL SKILLS

Languages: Java, Python, SQL, Pyspark, R

Developer Tools: Git, Microsoft Azure, Visual Studio

ML Models: Regression, Classification, Decision Trees, TF-IDF, Reinforcement Learning