

Sophie Wu

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EDUCATION

Massachusetts Institute of Technology

2021 - 2025

- Mathematics with Computer Science (GPA: 5.00 / 5.00)
 - Courses: Statistics for Applications, Statistical Data Analysis, Algorithm Design & Analysis, Econometric Data Science, Intro to Machine Learning, Numerical Methods
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Cambridge, MA

WORK EXPERIENCE

Hudson River Trading: Algo Developer Internship

May - Aug 2024

- Researched factor models for intraday returns of US equities: investigated stability of principal component factors and their correlations with fundamental factors
- Live trading on Brazilian equities: researched signals for short-term price prediction (e.g. order book imbalance, trade impulse) and implemented order execution logic

Five Rings: Quantitative Trader Micro-Intern

January 2024

- Participated in mock trading, competed in automated trading design contests
- Competed in and won a math/statistics-based strategy game
- Received classroom-style instruction and mentorship from full-time traders

BlackEdge Capital: Quantitative Trading Internship

June - Aug 2023

- Analyzed historical data in the treasuries market to improve the firm's implied volatility model, in particular volatility associated with market events
- Created and implemented a metric for computing short-term realized volatility
- Assisted in model fitting and risk management for an active trading environment

Hudson River Trading: Women in Trading Technology Internship

January 2023

- Explored high frequency trading over 4 weeks, with projects including order book implementation and signal-based price prediction in an active trading environment
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COMPETITIVE EXPERIENCE & AWARDS

Competition Math

2016 - Present

- 2-time USAJMO qualifier, 2-time USAMO qualifier (top ~250 scorers nationwide)
 - Member of consistent top-five ranking teams in events like ARML, HMMT, CHMMC
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LEADERSHIP

Harvard-MIT Mathematics Tournament - hmmt.org

2021 - Present

- Tournament Director: overseeing all club operations, leading the officer team
- Reg Director: handling event registration, communicating directly with contestants

MIT Battlecode - battlecode.org

2022 - 2023

- Logistics/Relations: managing event logistics/travel, publicity, sponsor outreach
 - Engine Dev: testing game logic; helping to design, visualize, and implement game
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LANGUAGES

- Python, Java, intermediate C++ & R
 - Fluent Chinese, proficient Spanish & Korean
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