ETHAN LEE

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EDUCATION

Harvard University Cambridge, MA
A.B in Computer Science, GPA: 3.934/4.00 May 2023
A.M in Statistics, GPA: 3.669/4.00 May 2023
Relevant Coursework: Quantitative Finance. Statistical Inference. Machine Learning. Data Structures & Algorithms. Probability. Quantum Computation & Quantum Complexity. Systems Programming & Machine Organization.
Activities: Harvard Open Data Project (President). Harvard Computer Society (Director of Diversity & Inclusion). Datamatch (Algorithms/Web Dev). Harvard Data Analytics Group. Harvard Crimson. Asian American Dance Troupe.

Needham High School Needham, MA
US Presidential Scholars Semifinalist. Valedictorian. Class Day Speaker. 5-time AIME. MIT CSAIL Lab Intern. June 2019

WORK EXPERIENCE

Optiver Chicago, IL
Equities & Options Trader August 2023 – November 2023
- Completed training program for portfolio and options theory fundamentals, underwent month-long simulated trading, and analyzed corporations and market to find profitable investing and trading strategies.

Capital One New York, NY
Intern, Financial/Investment Banking Software June 2022 – August 2022
- Developed a unified testing environment in Python and JavaScript for simulating investment banking decisions, regression tests, and other unit tests to be used by Capital One's Capital Markets division.

World Data Lab Vienna, Austria
Principal Investigator, Econometric Modeling and Policy Research August 2021 – March 2022
- Created econometric modeling algorithm for classifying economic and financial factors in NYC data; to be used to affect policies on financial recovery from COVID-19 in the Bronx.
- Selected by Alfred P. Sloan Foundation for research grant through "extremely rigorous" review.

Republic of Paraguay, Department of Public Contracting Asuncion, Paraguay
Intern, Financial Modeling June 2021 – September 2021
- Predicted market prices of goods/services in Paraguay's public procurement process using R and Python.
- Used linear regression, random forest, XGBoost, generalized additive model, and elastic net regression; reduced RMSE to within 3 USD of actual prices. Final model implemented in Paraguay financial corruption investigations.

Echelon Insights (echeloninsights.com) Washington, D.C.
Intern, Data Science June 2020 – August 2020
- Created sentiment analysis models for analyzing business' public discourse using natural language processing and neural networks with Python; improved model accuracy from 15% to 60%.
- Scraped election result data from 100+ congressional districts through BeautifulSoup.

LEADERSHIP & PROJECTS

Analytical Investment & Sports Betting Framework Chicago, IL
Initiative Leader November 2023 – Present
- Translating fundamentals of trading theory into an analytical approach to personal investing and sports betting with an optimal edge-variance and sizing framework. Applying basic statistical arbitrage techniques to personal portfolio.

Economic Causal Effects of Abortion Restrictions Cambridge, MA
Project Member April 2023 – May 2023
- Analyzed the benefits of a multi-resolution framework in determining the validity of the parallel trends assumption to identify the causal effects of statewide abortion restrictions on female employment, income, and other economic factors.

Harvard Open Data Project Cambridge, MA
President March 2021 – April 2022
- Led and managed 250+ members and $15k+ in funds; oversaw renovation and update of hodp.org.
- With Cambridge Open Data Program, organized annual datathon; led case competition with 150+ participants on analyzing housing market and affordability in Cambridge; reports presented to Cambridge zoning and housing staff.

Philippines Job Market Analysis Cambridge, MA
Project Member November 2020 – December 2020
- Conducted analysis of factors of first-time salaries in Philippines, investigating effects of industry, gender, and university.
- Used linear regression, mixed effects, LASSO, and random forest models; RMSE of best model as low as 0.18.

SKILLS & INTERESTS

Certifications: SIE, Series 57

Technical Skills: Financial Data Analysis (NumPy/Pandas/Scikit-learn), Options Theory, Investment Research, Trading Software Research, Python, R, SQL, JavaScript (React, Node/Express, D3), C++, Java, HTML/CSS, MATLAB, OCaml, and Coq.

Personal Interests: Personal Investing, Entrepreneurship, Sports Analysis, Story Writing, Soccer, Music Composition.