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## EDUCATION

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**Berkeley, CA**

**University of California, Berkeley**

**Planned Graduation: May 2026**

- B.A. Economics and Data Science
- Relevant coursework: Mathematics: Calculus, Linear Algebra, Probability, Statistics. Computer Science: Data Structures & Algorithms, Discrete Mathematics. Economics: Microeconomics, Macroeconomics, Econometrics
- Research: Built ML-based trading systems for time-series forecasting, factor modeling, and portfolio optimization, leveraging market and alternative data to enhance predictive accuracy.

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## TECHNICAL SKILLS

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- Programming Languages: Python, JavaScript, SQL, R, C++, Scheme
- Frameworks and Libraries: React.js, Next.js, Node.js, Scipy, Numpy, Pandas, Matplotlib, Optimization libraries
- Tools & Platforms: Git, Github, Visual Studio Code, Vim, JupyterLab, Microsoft Office
- Specialized Skills: Machine Learning, Data Analysis, Web Development

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## EXPERIENCE

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**Intern**

**necoTECH - Sustainable Materials Venture**

**May 2023 - September 2023**

- Developed Python/Pandas analytics system to efficiently process and identify federal contract opportunities through databases, saving hundreds of research hours and costly subscription services.
- Analyzed market opportunities using Python, processing 1000+ leads with quantified metrics prior to launch.

**Founder and President**

**Student Climate Action Team**

**January 2023 - August 2024**

- Founded a student-led environmental organization, helped launch a renewable energy program reducing all household CO2 emissions by 10% with renewable energy, and developed a website to boost climate advocacy.

**Eagle Scout**

**October 2023**

- Led the construction of a 20-acre park for my Eagle Scout project on school district land, focusing on environmental education, requiring extensive outreach and strategic management.

**Web developer**

**January 2024 - Present**

- Built websites using Next.js and Supabase, integrating data visualization and market APIs for investment club dashboard. Led client engagement initiatives, increasing traffic by 200-300%.

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## PROJECTS

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- **Quantitative Trading** Developed data-driven trading strategy using breakout pattern analysis tool built with Next.js and TypeScript. Generated 100,000+ sample dataset across timeframes, applied reinforcement learning to optimize recognition, and backtested on historical data, achieving 40%+ returns with robust out-of-sample performance.
- **Quantitative Risk Analysis** Built LSTM price prediction model integrating VaR and volatility metrics on 10,000-stock dataset. Engineered technical indicators and risk-adjusted scanners using Wharton Research Data Services data, with Python tools for portfolio risk analysis and stress testing.
- **COMPSCI 61B** Implemented efficient data structures and graph algorithms in Java achieving O(1) time complexity, with applications to high-frequency trading system design and order book management.
- **Online courses** (Fall 2023 - present). Completed coursework in Python, backend development, data structures, and quantitative methods. Pursued self-directed learning in advanced mathematics, probability theory, linear algebra, and statistical modeling, with a focus on stochastic processes, numerical optimization, and quantitative finance applications.