

Ashton Coates

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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, Python, Option Pricing, Probability & Stochastic Processes

University of California

Davis, CA

Bachelor of Arts in Economics (GPA: 3.5/4.0)

June 2024

Concentration: Data and Economic Analysis; Minor: Computer Science

- Courses: Econometrics, Machine Learning, Probability, Multivariable Calculus, Mathematics for Economics
- Awards: Highest Honors

SKILLS

Computing: Python (NumPy, Scikit-Learn, Pandas, TensorFlow) SQL, C++, Java, R, MATLAB, Linux, Stata, Rust

Knowledge: Financial Markets, Machine Learning, Data Analytics, Econometrics, Time Series Modeling

EXPERIENCE

UC Davis Department of Economics

Davis, CA

Honors Thesis

September 2023 - March 2024

- Conducted research and wrote an undergraduate thesis under direction of a Professor of Economics
- Applied R and Python to analyze data from hundreds of thousands of households
- Utilized techniques such as difference-in-difference regression modeling to establish a causal relationship between extreme temperatures and disproportionate increase in energy usage of high-income households
- Presented research findings to economics department professors and faculty

Sacramento Municipalities Utilities District

Sacramento, CA

STEM Market Research Intern

September 2022 - March 2024

- Employed linear regression and machine learning techniques to analyze customer behavior data, contributing to several end-to-end research projects.
- Developed data pipelines through Python, SQL, and Linux CLIs, using GitLab for version control, automating manual tasks saving about 50 hours per month and reducing data discovery time.
- Utilized Python and Flask to develop application harnessing GPT-3.5, automating a laborious task and simplifying processing of survey results
- Created presentations and communicated research results to non-technical management and stakeholders in other business areas and organizations

PROJECTS

University of California

Davis, CA

Algorithmic Stock Trading System

July 2023 - Present

- Built and maintain an algorithmic trading system in Python running on Raspberry Pi
- Employ techniques such as linear regression, KNN-classification, and Vectorized Backtesting to develop and evaluate trading strategies
- Developed a system of classifying market regimes to allocate resources to concurrent trading strategies

University of California

Davis, CA

Orderbook

March 2024 - June 2024

- Built an implementation of an orderbook system in Rust facilitating buy and sell orders of assets with several different order types
- Utilized design principles to allow ease in further feature implementation

EXTRACURRICULAR

University of California

Davis, CA

- Finance and Investment Club
- Triathlon Club

March 2023 – March 2024
September 2022 – March 2023