

# Brennan Stevens

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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
- Anticipated Courses: Applied Stats I-III, Time Series Forecasting, Stochastic Calculus I-II, Mathematics for Machine Learning I-II, Machine Learning for PDEs, Quantitative Trading Strategy, Advanced Computation
- FinMath Alpha Scholarship (60% Tuition) recipient

### University of California, San Diego

San Diego, CA

#### Bachelor of Science in Mathematics, Economics (Cumulative GPA: 3.8)

June 2024

- Courses: Stochastic Processes I-II, Computational Statistics, Econometrics I-III, Numerical PDEs, ODEs, Numerical Modeling, Financial Mathematics I-II, Real Analysis, Fourier Analysis, Applied Linear Algebra
- Provost Honors quarterly recipient, Muir College Caledonian Society, Senior Honors Society

## SKILLS

**Computing:** Python, R, MATLAB, Stata, Excel

**Knowledge:** Statistics & Econometrics, Numerical Methods, Probability & Stochastic Processes, Financial Markets

**Academic Interests:** Potential Theory and PDEs, Dynamic Systems, Chaos Theory, Fourier Analysis

## WORK EXPERIENCE

### La Jolla Cove Investors, Inc.

San Diego, CA

#### Analyst (Part / Full Time)

December 2022 – April 2024

- Conducted fundamental analysis on smallcap equities in preparation for activist shareholder investment
- Involved in structured deals exceeding \$1M in convertible debt and \$10M in equity purchase agreements
- Explored strategies in exchange traded options, OTC options, and structured derivatives
- Performed business development related tasks to build partnerships and develop strategic partnerships

### United States Navy

USS Essex, LHD-2

#### Aerographer's Mate Second Class (Active Duty)

August 2018 – August 2022

- Deployed 540 days aboard the USS Essex (LHD-2); Operation Inherent Resolve; Global War on Terrorism
- #1 ranked (99th Percentile) Sailor across the entire United States Navy (2021 advancement cycle)
- Navy and Marine Corps Achievement Medal; Fleet Letter of Accommodation from Admiral M.W. Baze

## RESEARCH & PROJECT EXPERIENCE

### Energy Time Series Analysis Using Computational Statistics

San Diego, CA

- Performed stationarity and white noise statistical tests (ADF, Ljung-Box) on energy-related time series data, obtaining p-values through data permutation and bootstrapping
- Developed and evaluated ARIMA and GARCH models for analyzing and predicting future crude oil (WTI) and electricity (FRED) prices, as well as PJM electricity usage
- Implemented machine learning techniques such as ridge and LASSO regression, regression trees, and principal component analysis to further study energy-related time series data

### Numerical Methods for Solving the Black-Scholes PDE

San Diego, CA

- Implemented implicit / explicit Euler, Crank Nicolson, and Lax-Wendroff finite difference schemes to numerically solve and plot the Black-Scholes Partial Differential Equation surface in MATLAB
- Analyzed numerical stability of Black-Scholes finite difference solutions using Von-Numann analysis
- Simulated stochastic volatility and jump diffusion models for option pricing in Python
- Designed Fourier transform & Brownian motion methods for solving PDEs such as the Black-Scholes PDE

## ADDITIONAL INFORMATION

**Certifications:** Portfolio Construction with Python, Python for Finance (Coursera), Bloomberg Market Concepts

**Interests:** Personal Option Trading, Chess, Veteran Mentorship, Weight Lifting, Running