

Edward Zhang

Dunlap, IL | +1 (309)-857-5137 | ezhang2025@gmail.com

EDUCATION

Duke University

B.S. Mathematics and Computer Science

Durham, NC

Graduation December 2025 | **GPA: 3.97**

Coursework: Algorithmic Trading, Mathematical Finance, Machine Learning, Statistical Learning & Inference, Financial Derivatives, Regression Analysis, Asset Pricing and Risk Management, Probability, Data Science

Campus Involvement: Quantitative Finance Club, Duke Applied Machine Learning, Vex Robotics, Formula SAE

PROFESSIONAL EXPERIENCE

PIMCO (Pacific Investment Management Company)

Execution Technology Developer Intern

June 2024 – August 2024

Newport Beach, CA

- Streamlined systematic trade flow process in execution management system, combining 3 steps for 30% time reduction
- Added functionality to automatically import trades to order management system, allowing traders a 70% time reduction
- Working on market making tool for credit trades and programs to create & optimize block trades from manual flow

Square Kettle LLC

Quantitative Trading Intern

January 2024 – May 2024

Champaign, IL

- Shadowed traders on index futures and index options desks; wrote weekly economic and volatility reports to assist trading
- Developed and backtested SPY RSI divergence strategy using scipy, quantlib, and backtrader

Caterpillar

Global Finance Services Intern

May 2023 – August 2023

Peoria, IL

- Utilized DBSCAN clustering algorithm for in-house machine learning model to reduce invoice classification time by 50%
- Shadowed traders managing risk exposure for lead, palladium and cobalt physical portfolios using futures and derivatives
- Researched and implemented the use of Bayesian regression for proxy-hedging strategies in 3 emerging market currencies

DYAD (dyadstable.xyz)

Quantitative Researcher – Core Team

August 2022 – May 2023

San Francisco, CA

- Utilized Monte Carlo methods (simulated annealing) to validate algorithms for DYAD, a cryptocurrency pegged to USD
- Constructed models using ETH volatility to price DYAD investment for 5+ VC firms (Road Capital, NGC Ventures)
- Developed efficient smart contract and token sync algorithm, helping protocol to achieve \$1.5m TVL with minimal gas fees

University of Illinois Urbana-Champaign

Research Intern

June 2021 – September 2021

Champaign, IL

- Utilized nonlinear optimization in Gurobi to find efficient Markowitz portfolio allocations with three NASDAQ equities
- Priced American options (TSLA) with Longstaff-Schwartz method and least-squares Monte Carlo simulation in Python
- Implemented Newton-Raphson method in Python to estimate underlying asset implied volatility with Black-Scholes model

PROJECT/LEADERSHIP EXPERIENCE

Personal Projects | Quantitative Researcher, Trader | TensorFlow, SciPy, QuantLib

August 2022 –

- Traded ETFs, ETF options, and currencies using fundamental and global macro strategies
- Designed cryptocurrency triangle arbitrage algorithm using Kalman filter and LSTM neural network in Binance data
- Trained hidden Markov Model for equity trading algorithm utilizing multiple factor models for economic regime change

Student Investment Club | Portfolio Manager (Spring 2023) – L/S Equities

September 2022 –

- Led team of 6 students to source and analyze 20+ equities with fundamental and quantitative methods
- Pitched NYSE: COLD based on analysis of REIT industry, resulting in 20% return on investment for \$100,000 portfolio

Cornell Trading Competition | Team Captain | Pandas, SciPy, sklearn

October 2022, October 2023

- Implemented delta-neutral options algorithm and Markowitz portfolio strategy to place 1st overall in 2022 Competition
- Used GARCH Model for high-frequency trading algorithm in cryptocurrency case, placing 5th in the 2023 Competition

SKILLS AND INTERESTS

Languages: Proficient: Java, Python (Pandas, SciPy, TensorFlow, sklearn), R, SQL; Introductory: C++, Solidity, React

Technologies: Power BI, L^AT_EX, AWS, Azure, Excel, PowerPoint, Premiere Pro, Illustrator, Android Studio, Solidworks

Interests: Chess, Formula One, Premier League, Satirical Films, Graphic Design, Table Tennis, Golf, Personal Fitness