

## EDUCATION

## Duke University

B.S. in Computer Science, Mathematics, Statistics, Minor in Economics

Cumulative GPA: 3.82/4.0

Relevant Coursework: Algorithms, High Dimensional Data Analysis, Stochastic Calculus, Abstract Algebra

Operating Systems, Real Analysis, Statistical Inference, Machine Learning

Durham, NC

Expected May 2025

## EXPERIENCE

## Duke Asset Management — Investment Research intern

June. 2024 — Aug. 2024

- Developed, implemented, and backtested Macro trading strategy for different Macro regime types
- Created a pricing model to improve liquidity for private holdings by applying continuity and estimation methods for the discrete pricing methods

## Chicago Trading Company — Quant Research intern

June. 2023 — Aug. 2023

- Quant intern on the QTA path - took options MM course and participated in mock trading
- Developed an oil futures pricing model on high dimensional data set using optimization techniques in python
- Utilized linear algebra and bayesian statistics to create factor model with encoded column parameter functions

## Proctor and Gamble — Software Engineering Intern

Jun. 2021 — Aug. 2021 and Jun. 2022 — Aug. 2022

- Used Excel VBA, PowerBI, and Tableau to analyze large data sets for trends and reduced P&G disposal and procurement costs by around\$ 1,000,000
- Implemented Monte Carlo Methods and Neural Networks to analyze data to find what factors and which packaging dimensions Pampers should use to minimize malfunctions in packaging saving 900 hours/year on the manufacturing lines

## Duke Statistics Department — Undergrad Researcher

Aug. 2023 — Present

- Optimized Hyperparameters for high dimensional problems - currently working with MCMC models

## PROJECTS AND LEADERSHIP

## Duke Quantitative Finance — Mentor and exec

Nov. 2021 — Present

- Created a community of around 300 students interested in the Mathematical/Computing side of Derivatives
- Competed in trading competitions and organized an Education Bootcamp to promote quantitative finance
- Led Project to 1) Used MCMC to find edge and generate profit in NBA and College basketball sports betting markets and 2) Look for arbitrages across different sportsbooks - current PnL: 1500
- Worked with the Mid Freq Trading team to use linear regression and other relations to derive profitable strategies in Crypto

## Duke Science Olympiad — VP of Finance

Aug. 2021 — Present

- Created budget for Duke Science Olympiad tournament with around 50 teams
- Fundraised money from various organizations and sponsors as well as Duke departments and Duke Student Activity Funds

## Catan Project — Project Leader

May 2024 - Present

- Coded game logic and UI for a Catan game that can be played by 4 players
- Developed a greedy heuristic player as well as a Reinforcement learning player as bots to play against

## AWARDS AND HONORS

## International Yau Research Competition — Top 10

Dec. 2019

## US National Yau Research Competition — 2nd Place

Nov. 2019

## American Invitational Math Examination — Qualifier

Feb. 2020

## Intel International Science Fair — Qualifier

April 2020

## US National Chemistry Olympiad — Top 50

April 2020

## UChicago Trading Competition — 5th Place

April 2022

## SKILLS AND INTERESTS

**Languages/Frameworks:** C++, Java, Python, SQL**Tools:** Microsoft Office, Google Apps, Data Structures, Algorithms, Data Modeling,  $\LaTeX$ **Interests:** Violin(8 years), Valorant, intramural Basketball/Soccer, Shoe Collecting, Epidemiology, Catan, Encoding decision making