Aniruddh Vasishta

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EDUCATION

Carnegie Mellon University, Pittsburgh, PA — Sept 2021 - May 2025
Bachelor of Science in Computational Finance, Minor in Computer Science — QPA: 3.83/4.00
Relevant Coursework: Probability, Continuous-time Finance, Machine Learning, Linear Algebra, Analytics and Algo Trading

WORK EXPERIENCE

Sales and Trading Intern, Barclays PLC — June - Aug 2024

- **Enhanced a C# backtesting engine** by adding attribution reporting for custom ETFs, improving backtester efficiency, and identifying a critical bug.
- Conducted comprehensive return analysis on 150 competitor indices, detecting potential overfitting to pre-live data.
- **Developed a sophisticated framework** for adjusting ETF returns based on corporate actions such as stock splits and dividends for integration with a proprietary regressive modeling module.
- Automated the identification of market trends by continuously updating the model with live data, streamlining the process of trend analysis.

Teaching Assistant, CMU Math Dept — Sep - Dec 2023, Jan-May 2024

- Taught classes Differential Equations (Sep-Dec) and Intro to Mathematical Finance (Jan-May) under Professor David Handron
- Held weekly recitations and office hours to aid student learning and get feedback on course material and teaching
- Graded homework assignments and exams, analyzed exam statistics, and provided individual student feedback

RESEARCH AND PROJECTS

Mathematical Finance Summer Undergraduate Research Program (MFSURP) — Jun 2023 - Aug 2023

- Collaborated with Professor William Hrusa at Carnegie Mellon on a group project on pricing convertible bonds
- Utilized theory of discrete-time financial models and fixed-income securities to find ways to price convertible bonds
- Automated calculations with use of Python libraries **numpy** and **pandas,** visualizations using **matplotlib**
- Thoroughly researched and presented weekly Market Watches on **equities, commodities, interest rate products, and foreign exchange**

Course Project: Advanced Quantitative Financial Analytics and Algo Trading — Jan 2024 - May 2024

- Conducted in-depth **research, backtesting, and optimization** of trading strategies on currency pairs using Python and the vectorbt library
- Cross-validated each strategy using different time frames, computed and analyzed performance metrics on historical data. Evaluated **strategy stability and robustness**, and modeled market depth, latency and slippage via a trading bot in Oanda API

ACTIVITIES

CMU Quant Club – President — Sept 2024 - May 2025

- Took responsibility for planning event dates and locations - contacted representatives from sponsoring companies
- Communicated with caterers to ensure food and drinks were delivered to Quant Club events
- Facilitated contact between company representatives and Quant Club members to ensure networking

CMU Quant Club Market-Making Game – (Team Competition) — March 26, 2022

- Priced and traded financial contracts by estimating answer to mathematical problems, **earning 3rd place for "Most Accurate Pricing Estimates"**
- Lead the **development and execution of trading strategies** to **take advantage of arbitrage opportunities** based on estimated values of securities

SKILLS AND AWARDS

- Programming Languages: Python (numpy, matplotlib, pandas), C, KDB+, ML, C#, Java, R, Excel
- "Outstanding Undergraduates" - CAARMS Research Conference
- Dean's List, High Honors (Fall 2021, Spring 2022, Fall 2022, Spring 2023, Fall 2023)