

EDUCATION

The University of North Carolina at Chapel Hill | Chapel Hill, NC

Bachelor of Science in Economics - Minor in Computer Science

Expected Graduation: May, 2026

Relevant Coursework: Data Structures, Linear Algebra, Discrete Mathematics, Intermediate Microeconomics, Introduction to Data Science and Econometrics

TECHNICAL PROJECTS

Stock Market – Bullish or Bearish Signal Algo

- Developed an algorithmic trading strategy using pandas and the Yahoo Finance API to execute buy/sell decisions based on 50-day and 200-day moving averages.
- Accounted for transaction costs (0.04%) to simulate realistic trading conditions.
- **Result:** Backtested strategy yielded a **366.32% return** on Zoom (ZM) while demonstrating the impact of transaction costs (-3.13% on Nvidia), highlighting the importance of fee management. Nvidia returned a **0.08% return** if no transaction costs were accounted for.

Backtesting: Trading Strategy – Pandas, NumPy, Matplotlib

- Backtested the above algorithm over a 10-year period (2015–2025), comparing performance against a buy-and-hold strategy.
- **Result:** Algorithm provided a slight outperformance in certain scenarios and demonstrated potential for further optimization with additional parameters being added and accounting for more common transaction costs (brokerage fees, slippage fees, etc.).
- **Insight:** Zoom experienced a significant surge in share price during the COVID-19 pandemic, followed by a steady decline post-pandemic. This algorithm is well-suited for capturing gains during such "boom" periods and managing trades over the following decade. Given the current unprecedented rise in share prices of several AI companies, applying this strategy to AI stocks could potentially yield profitable results.

News Article Web Scraper – NewsAPI, Python, HTML, CSS

- Built a web scraper using NewsAPI to retrieve articles from diverse global sources and implemented a keyword-based search feature.
- Rendered the results in an accessible web format using HTML/CSS, focusing on the 2024 US Elections to provide unbiased information from multiple sources.

Personal Experience in Equity Markets

Personal Trading Experience (2020 – Present)

- Actively traded over **\$10,000** in capital across equities and options, gaining practical insights into risk management, emotional discipline, and strategy refinement.
- Executed naked calls/puts and diversified into ETFs, developing a deeper understanding of market volatility, stop-loss techniques, and portfolio allocation.
- **Result:** Gained proficiency in recognizing trading patterns and adapting strategies to different market conditions.

SKILLS & INTERESTS

- Programming Languages:

Proficient in: Python, Java, C, JavaScript, React, HTML, CSS

Familiar with: R, C++, PostgreSQL, PyTorch, scikit-learn

- **Tools and Technologies:** Git, APIs, Machine Learning, NumPy, Matplotlib, Pandas

- **Finance/Trading:** Market Analysis, Risk Management, Backtesting, Financial Modeling

- **Clubs/Activities:** AI@UNC, Hackathons, DoorDash (Dasher)

- **Languages:** Basic Proficiency in German (3 semesters)

- **Interests/Hobbies:** Tennis, Rust, Movies, and Reading about market trends