

Nathaniel Yee

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EDUCATION

Northeastern University

B.S. Data Science and Business Administration: Finance, Minor: Mathematics

Boston, MA

Expected December 2026

• **GPA:** 3.7/4.0

• **Relevant Coursework:** Finance and Investments | Financial Accounting | Data Science 3500 | Business Statistics | Discrete Structures and Mathematics | Managerial Accounting | Database Design | Computational Methods In Finance | Data Visualization |

• **Clubs & Activities:** NU Systematic Alpha (Quant Club) | Downhillers Ski Club | Phi Gamma Delta |

RELEVANT EXPERIENCE

Wellington Management Company

Quantitative Trading Research, and Analytics Co-op

Boston, MA

January 2025-Present

- Built interactive Tableau dashboards to analyze FX trading activity, providing insights into broker/dealer rankings, alpha trades and funding trades driving optimized execution venue selections and minimizing slippage costs.
- Designed pre-trade cost models for futures and municipal bond trades using Python, SQL, Plotly Dash, XGBoost, and Bokeh enabling estimation of pre-trade implicit costs, including time-to-trade projections and notional pre-trade cost projections.
- Performed transaction cost analysis on commodity futures using Python and SQL identifying execution patterns from historical trading data to optimize liquidity sourcing and enhance participation weighted percent performance. Reducing implicit trading costs ~1-5 bps.

John Hancock

Actuarial Co-op

Boston, MA

January 2024 – June 2024

- Extracted, refined, and analyzed data to generate Daily Production Reports (DPR), utilizing Excel, PowerBI, and Microsoft SQL Server, ensuring accuracy and timeliness in tracking key performance indicators. Providing insights into financial performance, business segment financial risk, and aiding decision-making processes for the U.S. CFO and CEO, on transactions of ~\$100 million daily.
- Modeled Death Benefit Commutation Values for payout annuities utilizing Excel, integrating effective annual interest rates, fixed income payments, and lapse schedules.
- Implemented methods of streamlined processes for data cleaning, processing, and analysis using VBA, resulting in automation of 300 manual model inputs on Quarterly Contractual Service Margin (CSM) Reconciliation US Brokerage reports.

Bay Specialized Tax Services

Business Development and Marketing Intern

Nashville, TN

June 2023 - August 2023

- Founded and spearheaded a dynamic social media marketing team, driving strategic advertising initiatives across social media platforms.
- Developed and launched innovative marketing campaigns across Instagram and TikTok accumulating +10,000 views and increasing impressions by 50%.

ACTIVITIES & INVOLVEMENTS

Northeastern Systematic Alpha

President

Boston, MA

September 2024 - Present

- Develop and deliver lectures on quantitative finance topics, including asset valuation, factor modeling, statistical analysis, probability theory, and regression techniques, tailored to equip students with practical and theoretical insights.
- Lead a team of researchers on researching weather, supply and demand, seasonality, and satellite imaging data to construct a factor model to predict spot Oil prices, using alternative datasets.

TECHNICAL PROJECTS

[BLACK-SCHOLES SCENARIO ANALYSIS VISUALIZER](#)

- Developed an Options Price Calculator using streamlit, numpy, and seaborn to calculate and visualize Call and Put option prices based on the Black-Scholes model.
- Implemented scenario analysis with dynamic input fields for current stock price, strike price, time to maturity, volatility, and risk-free rate to simulate various pricing scenarios.
- Visualized option pricing with heatmaps that display the effect of changing spot price and volatility ranges on Call and Put prices.

[QUANTITATIVE ANALYSIS ON REDDIT SENTIMENT'S IMPACT ON MARKET VOLATILITY AND RETURNS](#)

- Conducted sentiment analysis on Reddit's r/wallstreetbets data and Yahoo Finance stock price data for a year, revealing no statistically significant correlation between sentiment scores and overall portfolio returns (p-values > 0.16).
- Identified a significant increase in market volatility (p-value < 0.05) when negative sentiment was expressed on r/wallstreetbets, suggesting a possible influence of sentiment on volatility trends.
- Analyzed Reddit sentiment's impact on Sharpe Ratio, a risk-adjusted return metric, finding no significant correlation with sentiment scores (p-values > 0.16), implying sentiment's limited effect on risk-adjusted returns.

SKILLS

TECHNOLOGIES: Python | SQL | Figma | Microsoft Suite | HTML | CSS | VBA | Tableau |

SOFTWARE/TOOLS: Pandas | Seaborn | Scipy | NLTK | Statsmodels | Scikit-Learn | Altair | Streamlit | Docker | Git/Github | XGBoost |

INTERESTS: EDM Production | Investing | Chess | Photography | Sushi | Weightlifting | Running | Piano, Clarinet, and Ukulele | Niche Fragrances |