Rohan Malhotra

973-713-3741 | rohanm.org | ram9952@nyu.edu | linkedin.com/in/rohanamal | github.com/rohanmalhotra0
New York, NY — Chatham, NJ

Education

New York University, Courant Institute — Aug 2025 - Dec 2027
B.A. Computer Science and Economics; Minor in Mathematics — **Combined GPA: 3.75**

- **AAAS Scholar:** A national program recognizing thriving undergraduate STEM students with disabilities

Virginia Tech College of Engineering — Aug 2024 - May 2025
B.S. Computer Science — Transferred May 2025

Technical Skills & Certifications

Certification: Exam P (Sept 2025), Exam FM (Oct 2025), Finra SIE (Sept 2025)
Languages: Python, Java, SQL, C/C++, R, HTML/CSS, MATLAB, JavaScript, Swift
Frameworks/Libraries: Pandas, NumPy, Matplotlib, Scikit-learn, Node.js, Next.js, React, Flask
Tools/Technologies: Excel, Git, GitHub, Linux, Alpaca API, Polygon API, NodeJS, LaTeX
Relevant Coursework: Data Structures and Algorithms, Micro & Macroeconomics 1–2, Computer Systems, Calculus 1–3, Linear Algebra, Discrete Mathematics, Statistics & Probability, Data Structures 1, Differential Equations

Experience

Machine Learning Intern — June 2025 – Aug 2025
ARESS Software — Chatham, NJ

- Collaborated on **LASSO** and **Ridge Regression** prototypes in Python (**scikit-learn**) to forecast IT–support incident resolution times, with pilot results indicating a 15% projected improvement in SLA compliance.
- Developed interactive Excel dashboards for real-time reporting of service metrics and model performance, enabling operations teams to make data-driven prioritization decisions.

Business Analyst Intern — June 2024 – Aug 2024
Y-Axis Overseas Careers — Blacksburg, VA

- Cleaned and normalized **SQL** data on client profiles and visa-application records to feed **predictive models** forecasting approval rates and processing timelines, reducing data-preparation time by 15%.
- Built **Excel** dashboards visualizing forecasted metrics and translated findings into clear, actionable recommendations for non-technical stakeholders.

Aerospace Research Assistant — Aug 2024 – May 2025
Hume Center for National Security and Technology — Blacksburg, VA

- Collaborated with a multidisciplinary team to research **imaging & signal-processing** techniques for environmental coral reef health applications.
- Co-authored a **NASA CubeSat Launch Initiative** proposal, coordinating requirements with stakeholders and integrating autonomous imaging systems.

Projects & Publications

Reddit Data in Quantitative Financial Models | Link: hdl.handle.net/10919/124871 — Published: Feb 2025

- Co-authored a paper analyzing Reddit posts on r/wallstreetbets and correlating sentiment to stock-price movements.
- Examined the relationship between online sentiment spikes and market volatility for predictive modeling use.
- Found a positive correlation between the frequency of stock-symbol mentions and subsequent price changes.

Quantum Oscillating Screening Model | *Python, Polygon API, Matplotlib* — Jan 2025

- Automated clean data collection using Excel for SPY and QQQ with Polygon API.
- Developed a screening model to identify overvalued stocks using oscillatory motion concepts.
- Incorporated cyclical analysis to model price fluctuations over daily periods.

RSI Prediction Model Using Starbucks Sales Data | *Python, Random Forest, Pandas, NumPy* — June 2025

- Trained a Random Forest model to predict SPY RSI trends using macro-correlated Starbucks sales data.
- Engineered 4+ custom indicators and backtested 3 machine learning algorithms to evaluate predictive performance.

Leadership and Community

Pivot At VT — Sep 2024 – Present
Co-President & Lead Software Engineer — Blacksburg, VA

- Leading a 40-member club I apply physics-driven solutions toward complex engineering and financial challenges.
- Created physics-inspired models, achieving up to 68% predictive accuracy using the Alpaca Trading API.

Special Olympics — Sep 2019 – Present
Volunteer & Intern — Chatham, NJ

- I interned at a school for students with disabilities and taught math. I am also a 5 year volunteer for Special Olympics.