

# Rohan Malhotra

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New York, NY — Chatham, NJ

## Education

**New York University, Courant Institute**  
B.A. Computer Science and Economics; Minor in Mathematics

Aug 2025 - Dec 2027  
**Combined GPA: 3.75**

**Virginia Tech College of Engineering**  
B.S. Computer Science

Aug 2024 - May 2025  
Transferred

## Technical Skills & Certifications

**Actuarial Exams:** Exams Passed: Exam P, Exam FM | Scheduled: MAS-I (March) MAS-II (June)

**Languages:** Python, Java, C/C++, SQL, R, JavaScript, HTML/CSS, MATLAB

**Technologies:** TensorFlow, Flask, React, Three.js, Node.js/Next.js, WebSockets, Git/GitHub, Linux, Excel, Visual Basic

**Coursework:** Data Structures and Algorithms, Computer Systems, Calculus 1–3, Theory Probability, Discrete Math, Linear Alg

## 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

### Refrax: Learning Platform for Finance, Physics, and CS | Link: [refrax.io](https://refrax.io)

2025–Present

- Built an interactive learning platform uniting **computer science**, **finance**, and **physics** to explore quantitative methods.
- Developed **3D visualizations** of stock data, integrated **mathematical equation rendering**, and added support for **custom datasets 3D/2D modeling** with real-time analysis, through the use of AI.
- Implemented **animated modules** to illustrate complex financial and physical models, enhancing accessibility and engagement.
- Integrated an **AI Assistant** to guide users, answer questions, and provide personalized insights into data interpretation.

### Reddit Data in Quantitative Financial Models | Link: [hdl.handle.net/10919/124871](https://hdl.handle.net/10919/124871)

Published: Feb 2025

- Co-authored a **published paper** analyzing Reddit posts on r/wallstreetbets and correlating sentiment to 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.

## Leadership

### Pivot at VT

Sep 2024 – Present

Co-President & Lead Software Engineer

Blacksburg, VA

- Lead a **40-member interdisciplinary organization**, coordinating project teams, managing GitHub workflows, and overseeing algorithm integration to apply physics-driven computational methods to engineering and financial challenges.
- Developed a **Raspberry Pi-powered automated trading bot** integrating live market data, Python scripting, and oscillatory models, achieving up to **68% predictive accuracy** with the Alpaca Trading API.
- Mentor members in advanced programming and quantitative methods, fostering collaboration across physics, finance, and CS.

### Special Olympics

Sep 2019 – Present

Intern & Volunteer

Chatham, NJ

- **Interned** at a school for students with disabilities teaching math and served as a **5-year volunteer** for Special Olympics.