

# Joe Hollander

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*Passionate and motivated high school student with a strong interest in finance, mathematics, and their intersection.*

## EDUCATION

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### South Burlington High School

High Honors (Current GPA: 3.99/4.0), PSAT (1520/1520)

South Burlington, VT

August 2022–Present

Relevant Coursework: AP Calculus BC (Exam Score: 5/5)

### University of Vermont

GPA: 4.0/4.0

Burlington, VT

July 2024

Relevant Coursework: Calculus 3

## PROJECTS

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### KAGGLE

- Cleaned and prepared data using multiple data cleaning techniques, such as imputation, PCA, statistic replacement, and normalization
- Used different machine learning models, such as Random Forest models, Clustering models, and Ensemble models, in multiple competitions
- Visualized data with Matplotlib and Seaborn to highlight trends and patterns

### PRICING OPTIONS

- Used the Black-Scholes model to price European style options, display changes based on underlying price, and graph simple option strategies
- Implemented Binomial Tree models to price American and European style options
- Analyzed option dataset to visualize flows across various strike prices and expiration dates

### CRYPTOCURRENCY DATA COLLECTION

- Used Websocket and REST APIs to gather orderbook, volume, and orderflow data from the Kraken exchange
- Created asynchronous script to model option price variations based on underlying asset movements
- Implemented Python scripts to optimize data storage using Parquet and Git

### AUTOMATED SCORE SHEET GENERATOR

- Created an automated script that generated score sheets for soccer games, improving efficiency and accuracy
- Used Selenium and BeautifulSoup to scrape data from the website
- Used Pandas to clean and organize data, and then used PDFkit to generate printable PDF files

## EXTRACURRICULAR ACTIVITIES

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- Math League Regional Champions (2022-2025)
- Voted Math League Captain (March 2025)
- Varsity Ultimate Frisbee (Spring 2024, 2025)
- Varsity Soccer (Fall 2024)
- Club Soccer (2017-2025)
- Club Soccer Captain (2025)
- Ping Pong Club President (2024-2025)
- Math Tutoring ( $\approx$  30 hours)

## SKILLS

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- Leadership
- Python 3 (NumPy, Pandas, Matplotlib, Scikit-Learn)
- Git
- Docker

## AWARDS

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- 7th Place in the Greater Burlington Math League (2024-2025)
- National Merit Semifinalist
- 2nd regional prize in the Vermont High School Prize Examination (May 2024)
- High Honor Roll for the duration of my high school experience