

# Yash Shah

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## EDUCATION

### Rutgers University

New Brunswick, NJ

*Bachelor of Science in Computer Science and Economics with minor in Mathematics*

*May 2026*

- **Activities:** Rutgers Competitive Programming, Quantitative Finance Club, Data Science Club, Cloud Computing Club, Omicron Delta Epsilon (Economics Honor Society), Habitat For Humanity, American Cancer Society
- **GPA:** 4.0/4.0
- **Relevant Coursework:** Data Structures, Computer Architecture, Intro to Discrete Structures, Multivariable Calculus, Data101, Intro to Linear Algebra, Intermediate Microeconomic Analysis, Intro to Statistics

## EXPERIENCE

### Lead Instructor

May 2022 – May 2023

*Mathnasium*

*Edison, NJ*

- Enhanced student engagement and learning outcomes by designing and implementing unique teaching methods, resulting in a 25% increase in retention of students year over year
- Utilized data-driven insights to develop a tailored curriculum for each student, fostering an average of 2 grade-level improvements in math proficiency over 6-month intervals
- Elevated team performance by conducting thorough skills assessments of instructors, strategically allocating tasks based on proficiency levels, resulting in heightened productivity and exceptionally low turnover

## PROJECTS

### Rutgers Foodies | *React.js, Python, TailwindCSS, Git*

September 2023

- Employed reverse engineering techniques to dissect and comprehend the Rutgers getInvolved API, enabling the parsing of event data, and put this converted into a pandas data frame then converted to a JSON file
- Leveraged the React.js framework to architect a highly dynamic and responsive user interface utilizing TailwindCSS for intricate styling, ensuring optimal user engagement and experience
- Demonstrated adeptness in Git version control to manage collaborative development effectively deploying the web application on GitHub Pages, showcasing proficiency in deployment strategies for accessibility to a global user base

### RESTaurant Rater | *JavaScript, Node.js, Express.js, PostgreSQL*

July 2023

- Designed and implemented a highly resilient back-end REST-API tailored for managing and processing JSON data pertaining to user-generated restaurant reviews
- Leveraged the powerful combination of Express.js and Node.js to handle HTTP requests, ensuring seamless routing of JSON data to and from the PostgreSQL database.
- Engineered intricate CRUD operations, employing sophisticated SQL queries to facilitate database modifications via JSON data inputs to optimize data retrieval operations from the database for enhanced efficiency.

### Pairs Trading Script | *Python, Pandas, NumPy, SciPy, Matplotlib*

June 2023

- Conducted analysis of time-series data for two correlated stocks, culminating in a pandas data frame to store the daily returns of each stock relative to the prior day's closing price obtained by developing a cointegration model
- Identified key divergence points between the two correlated stocks by crafting a unit root function. This function executed a rigorous T-test to assess the statistical significance of the divergences.
- Generated trading signals based on the analysis outcomes, determining opportune moments for trading actions. Calculated gross and net returns, then bench-marked them against the market, returning an alpha value to gauge performance graphed visualized the results using Matplotlib.

## TECHNICAL SKILLS / OTHER

**Web Technologies:** : JavaScript, TypeScript, PostgreSQL, React.js, Node.js, Express.js, HTML/CSS, TailwindCSS

**Data Analysis & Other Tools:** : Python, R, pandas, NumPy, Matplotlib, Plotly, SciPy, BeautifulSoup, Git, LaTeX

**Interests:** : Board Games, Cars, Reading, Coffee, Piano, Bagels, Photography, Hiking, Basketball, Formula 1