

# Yash Shah

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## EDUCATION

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### Rutgers, The State University of New Jersey

New Brunswick, NJ

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

*May 2026*

- **Activities:** Rutgers Competitive Programming, Data Science Club, Cloud Computing Club, Omicron Delta Epsilon (Economics Honor Society), Hack4Impact, Association of Indians at Rutgers, Habitat For Humanity
- **Major GPA:** 4.0/4.0
- **Cumulative GPA:** 3.6/4.0
- **Relevant Coursework:** Data Structures, Computer Architecture, Intro to Discrete Structures, Multivariable Calculus, Data101, Intro to Linear Algebra, Intermediate Microeconomic Analysis, Intro to Statistics

## EXPERIENCE

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### Lead Instructor

May 2022 – May 2023

*Mathnasium*

*Edison, NJ*

- Contributed to a 25% year-over-year increase in student retention through the successful execution and implementation of innovative teaching methods, resulting in elevated engagement and optimized learning outcomes
- Utilized data-driven insights to develop a tailored curriculum, leveraging a students' academic history and learning preferences, resulting in an average of two grade-level improvements in proficiency over six-month intervals
- Elevated team performance by conducting bi-monthly skills assessments of eight instructors, strategically allocating tasks based on proficiency levels, resulting in heightened productivity and low turnover

## PROJECTS

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### Rutgers Foodies (*JavaScript, React.js, TailwindCSS, Python, pandas*)

September 2023

- Reverse-engineered the Rutgers getInvolved API to filter 150+ events for those that had "Free Food," converted into a **pandas** data frame to process, and exported as a JSON file
- Designed the front-end with **React.js** to architect a highly dynamic and responsive user interface and utilized **TailwindCSS** for intricate styling, to ensure optimal user engagement and experience
- Utilized **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

### Pairs Trading Script (*Python, pandas, NumPy, SciPy, Matplotlib*)

June 2023

- Analyzed historical daily price data for two correlated stocks and utilized **pandas** and **NumPy** to construct a data frame to store returns of each stock relative to the previous day's closing price, enabling analysis of performance
- Identified key divergence points between the two correlated stocks by developing a unit root function that executed T-tests to assess the statistical significance of the divergences, optimized utilizing **SciPy**
- Generated trading signals based on the analysis outcomes, determining opportune moments for trading, calculated gross/net returns, and bench-marked them against the market, returning an alpha value to gauge performance

### RESTaurant Rater (*JavaScript, Express.js, Node.js, PostgreSQL*)

July 2023

- Developed back-end **REST API**, tailored for the management and seamless processing of JSON data focused on user-generated restaurant reviews
- Integrated **Express.js** and **Node.js** to handle HTTP requests, ensuring seamless routing of JSON data to and from the **PostgreSQL** database
- Engineered CRUD operations, using sophisticated SQL queries to facilitate database modifications via JSON data inputs to optimize data retrieval operations from the database

## TECHNICAL SKILLS / OTHER

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**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, Coffee, Piano, Bagels, Photography, Hiking, Basketball, Formula 1