Yash Shah

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Education

Rutgers University, New Brunswick New Brunswick, NJ

Bachelor of Science in Computer Science and Economics

- **Relevant Coursework:** Data Structures, Computer Architecture, Design & Analysis of Algorithms, Discrete Structures, Software Methodology, Linear Algebra, Intermediate Microeconomic / Macroeconomic Analysis
- **Activities:** Rutgers Competitive Programming, Omicron Delta Epsilon (Economics Honor Society), Road To Silicon Valley Program (Cohort 5), Alpha Phi Omega (Professional Service Fraternity), Habitat for Humanity
- **GPA:** 3.65/4.00

Technical Skills

Languages: Python, Java, JavaScript/TypeScript, HTML/CSS, R, SQL, LaTeX
Frameworks & Libraries: Spring, Hibernate, JavaFX, WildFly, React, Next.js, Node.js, Express, Flask
Tools, Platforms & Other: Git, Maven, Jira, BitBucket, AWS (EC2, Lambda, Neptune), Agile Methodologies

Experience

Software Engineering Intern June 2024 - August 2024

Raytheon

- Engineered a new alerts system and notification system using Spring MVC, Hibernate ORM, and H2 SQL database, implementing a RESTful API that **reduced alert delivery time by 20%**, improving overall responsiveness
- Deployed the back-end microservice on a WildFly servlet container and created 20+ server and client-side unit tests using JUnit and Mockito leading to greater stability and faster debugging
- Developed a JavaFX user interface for alert display, integrating it with the back-end service using asynchronous service calls resulting in a more receptive user experience
- Optimized machine learning model deployment in containerized environments by configuring JVM arguments and tuning the garbage collector, **reducing allocated but unused memory by 60%** while maintaining stability

Teaching Assistant (Data101) January 2024 - May 2024

Rutgers University

- Enhanced 27 students' proficiency in using R for data analysis, manipulation, visualization, and modeling, measured by their ability to solve challenging programming exercises, by creating comprehensive exercises
- Conducted 1 on 1s with students, teaching them how to identify patterns, formulate hypotheses, apply statistical tests, and utilize Bayesian reasoning, fostering their ability to derive meaningful insights from complex data
- Improved students' skills in building, training, and testing predictive models using techniques like K-fold cross-validation and regularization for optimization and enhanced accuracy

Projects

Polyhymnia.ai | Hack Princeton Winner

- Developed a web app that generates unique, and personalized sheet music tailored to each user's proficiency level, enhancing learning and practice for musicians of all skill levels
- Integrated Needleman-Wunsch algorithm to evaluate users' uploaded performances in pitch, rhythm, and timing, dynamically adjusting their proficiency score based on their performance for tailored progression
- Utilized Next.js for the front-end, MongoDB for the database, musical libraries like Lilypond and Midi to convert from sheet music to text, and Markov Chains to build a scalable algorithm to generate unique sheet music

Rutgers Foodies

- Parsed the data for over 100 event listings from the Rutgers getInvolved website, filtering for those offering free food, and built a website to display them to 50+ students daily during the semester
- Designed the web app to be engaging and user-friendly by focusing on making it responsive and ensuring an intuitive user experience through the use of React Hooks and Context API, enhancing the ease of use for users
- Enhanced scalability by optimizing server resources and managing CI/CD with GitHub Actions to update the event data and website daily, ensuring an up-to-date and consistent experience for students