# Shivam Ratnani

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## EDUCATION

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| University of Wisconsin-Madison: BS - Computer Science | September 2022 - May 2025 |
| University of Wisconsin-Madison: BS - Data Science | September 2022 - May 2025 |

## WORK EXPERIENCE

**Amara Social | Software Developer**                                      December 2023 - Present
- Signed an NDA to preserve software source code or any related codes in all formats.
- Developed a social networking app using React Native for iOS and Android platforms.
- Utilized Docker for containerization, enhancing the app's scalability and deployment process.
- Implemented backend using MySQL, enabling efficient data management and query processing.
- Integrated advanced functionalities in the app such as real-time messaging, user profiles, home feed with recommended and friends options, status feature, and more.

**Couillard Solar Foundation | Software Developer**                                      August 2023 - Present
- Built an interactive web-based application showcasing solar energy output for seven Deerfield, WI arrays, highlighting the impact of renewable energy in small communities by leveraging the Svelte framework for UI development and Vite for efficient build and deployment.
- Implemented interactive UI components and data visualizations using a tech stack comprising Svelte, Node.js, React.js, JavaScript, CSS, Plotly.js, ESLint, TypeScript, Cron, and SQL to ensure a responsive and user-friendly experience while maintaining code quality and scalability.
- Integrated Firebase and Github Actions for seamless real-time database interactions, authentication, and hosting services allowing for efficient data management and deployment processes.
- Developed a state management strategy and hot module replacement (HMR) implementation.

**IHConcepts | Software Developer**                                      August 2023 - Present
- Created, implemented, and maintained web applications using React, Next.js, CSS, and HTML, using libraries and frameworks to deliver a dynamic, cross-browser-compatible, user-friendly experience.
- Developed and maintained reusable UI components utilizing TypeScript, CSS, and HTML.
- Collaborated with other engineers to identify improvement areas, design and implement solutions, write maintainable Javascript code, and ensure high code quality.

**PerkinElmer Inc. | Information Technology Intern**                                      July 1st 2021 - August 30th 2021
- Worked with remote users to cross-network and provide files to remote employees.
- Operated and managed a network involving Google's Admin Suite and Windows user accounts, company computers, doorcards, printers, and server storage.
- Repaired problematic computers and set up computers for new employees.
- Created documentation for application usage, system integration, and data transfer.

## PROJECTS

**Website | github.com/shivamratnani/shivamratnani.github.io**
- Created a website using HTML and CSS Styling and improvised my website using React.js and Material UI elements allowing it to contain a dark mode feature, reactive buttons, and mobile device compatibility.
- Uses Github Actions to host React app on shivamratnani.github.io.

**Stock Volatility Analyzer | https://github.com/shivamratnani/Stock-Volatility-Analyzer**
- Data manipulation project in AWS using Python and React, designed to track and analyze over 19,000 stocks. The tool screens stocks at user-defined intervals and price ranges, displaying top gainers and losers based on the user's desired number of stocks to be outputted.
- Utilized EC2 for running the application, S3 for secure and scalable data storage with automated data retrieval, alongside AWS services like Lambda, API Gateway, and CloudWatch for comprehensive system functionality.

**Mobile Tasks Application | github.com/shivamratnani/Swift-Tasks-App**
- Developed a Swift/SwiftUI-based ToDoList app, integrating Firestore and FirebaseAuth for data management and user authentication, applying MVC architecture for improved maintainability.
- Crafted key SwiftUI UI components (e.g., HeaderView, TLButton) and utilized advanced features (e.g., @StateObject, @Binding) for dynamic, responsive interfaces.
- Implemented efficient data handling and state management using ObservableObject and FirestoreQuery, with Firebase Cloud Firestore for real-time user data synchronization.

**Amazon Web Scraper | github.com/shivamratnani/Amazon-Web-Scraper**
- Engineered a Python scraper to collect Amazon product data, utilizing BeautifulSoup, Selenium, and requests for web parsing, browser automation, and HTTP interactions.
- Implemented CSV files for the retrieval of product names, prices, ratings, reviews, and URLs.

**Connect 4 Game | https://github.com/shivamratnani/Connect$4_A I$**
- Developed a Connect Four game in Python, utilizing the Pygame library to create a graphical user interface. Implemented the Minimax algorithm with alpha-beta pruning to optimize the AI's decision-making process and heuristic evaluation techniques for dynamic game state assessment.

## SKILLS

Languages: Java, Python, C#, C, C++, HTML, Javascript, CSS, R, Swift, SQL, NoSql, SwiftUI, TypeScript
Frameworks: React, Svelte, Node.js, Jquery, TensorFlow, Keras, Plotly, MongoDB
Tools: Git, Github, Github Actions, Docker, AWS, Google Cloud Platform, Microsoft Azure, R Studio, VS Code, Intellij, Eclipse, PyCharm, XCode, Vite, ESLint, Firebase
Libraries: Material UI, pandas, NumPy, Matplotlib, REST APIs