

Shivam Ratnani

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Education:

University of Wisconsin-Madison:

BS - Computer Science & Data Science (Double Major)

Expected Graduation: **May 2025**

Work Experience:

Rightworks | Software Engineer Intern

July 2024 – August 2024

- Resolved over 21 critical bugs in the AngularJS-based AccessHub web application, enhancing functionality and stability for over 300,000 users.
- Collaborated on the development of a new Windows AccessHub application written in C#.
- Utilized DataDog to monitor and analyze API performance, identifying key areas for improvement in the web application's responsiveness.
- Designed and implemented a new state management system in AngularJS to address prevalent form issues, significantly improving user experience by replacing properties “.pristine, .dirty, and .touched”.

Couillard Solar Foundation | Software Developer (Volunteer Work)

August 2023 – Present

- Spearheaded the design and development of a reactive web-based solar energy visualization platform for Deerfield, WI using a tech stack including *Svelte*, *Vite*, *Node.js*, *React.js*, *JavaScript*, *TypeScript*, *SQL*, and *Firebase*, while implementing sophisticated UI components and data visualizations using *Plotly.js*.
- Engineered real-time database interactions, authentication, and hosting services. Created CI/CD workflows via *GitHub Actions*, and showcased the renewable energy impact of seven bus stops by prioritizing code quality, scalability, and user experience through the use of responsive elements.

IHConcepts | Software Developer I

December 2023 – April 2024

- Created web applications and reusable UI components using AWS, React, Next.js, CSS, HTML, libraries and frameworks to deliver a dynamic, cross-browser-compatible, user-friendly experience.

Amara Social | Software Engineer I

December 2023 – March 2024

- Developed cross-platform social networking app using React Native, Docker, and MySQL. Implemented features including real-time messaging, user profiles, customizable home feed, and status updates.
- Integrated advanced functionalities in the app such as real-time messaging, user profiles, home feed with recommended and friends options, status feature, and more.

Skills:

Languages: Java, Python, C#, C++, JavaScript, TypeScript, CSS, R, Swift, SQL/NoSQL, Go, Rust, Ruby

Frameworks: AngularJS, React, Svelte, Node.js, jQuery, TensorFlow, Keras, Plotly, MongoDB, SwiftUI

Tools: Git, Docker, Microsoft Azure, AWS, Google Cloud Platform, Firebase

Libraries: Material UI, pandas, NumPy, Matplotlib, REST

Projects:

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 system functionality.

Connect 4 AI Game

- Developed Connect Four game in Python using Minimax algorithm with alpha-beta pruning, optimizing heuristic evaluation for game state assessment; implemented GUI with Pygame library