

Rani Patel

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[Portfolio](#) | [LinkedIn](#) | [Github](#) | [Gitlab](#)

Software Engineer | Full-Stack Engineering | Product Design

Build and maintain scalable web applications and developer tools using agile methodologies, continuous integration, and cross-functional team collaboration. Advanced academic background in Software Engineering (M.S.), Biochemistry, and Computer Science. Demonstrated success in delivering user-centered software solutions, automating workflows, enhancing user experience, and improving code quality. Diverse project experience in game development, data visualization, and social impact applications. Passionate about leveraging technology to solve real-world problems with creativity, precision, and impact.

SIGNATURE COMPETENCIES

Programming Languages: JavaScript | HTML | Python | Java | C# | C++ | R | PHP

Web Development: **Front-End** (Bootstrap) (React) (jQuery), **Back-End** (Flask) (SQLAlchemy)

Databases: MySQL | PostgreSQL | SQLAlchemy (ORM)

Platforms: Git | Jira – **Machine Learning**

Operating Systems: Linux | Processing

Design: Adobe Creative Cloud (Adobe CC)

PROFESSIONAL EXPERIENCE

Sonatype

Technologies: React, Java, JavaScript, XState, Typescript, Figma, REST APIs, Docker, AWS, Jenkins, GitHub, Terraform, Datadog, Jira, Confluence, CI/CD

FULL STACK SOFTWARE ENGINEER | Jan 2025 – Present

Led high-impact full-stack and DevOps enhancements for Nexus Repository, focusing on modernization, analytics, and open-source experience.

- Upgraded core frontend and backend frameworks (React, Java) to improve performance, maintainability, and compliance.
- Refined analytics and reporting UIs, enhancing visual clarity and insight delivery for usage and egress data.
- Coordinated release cycles as Release Captain, managing CI/CD workflows and standardizing rollout processes.
- Simplified Docker/cloud configuration by removing deprecated options and improving user-facing setup docs.
- Championed open-source practices, with ~20% of work dedicated to the Community Edition.

ASSOCIATE SOFTWARE ENGINEER | Jan 2023 – Dec 2024

Contributed across the stack to improve Nexus Repository's performance, usability, and scalability for both enterprise and OSS users.

- Led foundational modernization of JavaScript and Java dependencies, reducing tech debt and boosting security.
- Developed advanced analytics and alerting tools (e.g., usage thresholds, system health banners) to enable proactive system monitoring.
- Expanded OSS support by integrating package formats like Cargo and Hugging Face, extending platform reach.
- Overhauled Docker and release workflows using Jenkins, simplifying deployment pipelines and internal releases.
- Designed and delivered key UX improvements in system configuration and cloud metering features.
- Authored internal guides on cherry-picking, release candidate validation, and publishing, improving team velocity and release consistency.

SOFTWARE ENGINEERING Intern | June 2022– December 2022

- Built and maintained reusable React/TypeScript components for [Sonatype's product design library](#).
- Converted Enzyme tests to React Testing Library (RTL), improving test reliability and maintainability.
- Translated design specs into functional UI through close collaboration with product designers.
- Supported continuous integration and code quality through GitHub pull requests and Jenkins.

Dow Jones

WEB DEVELOPER Intern | Summer 2021

Tools: React JS, NextJS, Servo, Mongo, AWS, GitHub, Jira, and Slack

- Built a full-stack MERN + AWS internal tool to automate sponsor/university onboarding for Barron's, including data scraping and visual representation.
- Developed real-time [futures \(stocks\) components](#) for Barron's site using React, NextJS, and a live data API.

EDUCATION

MASTER OF SCIENCE: SOFTWARE ENGINEERING | University of Houston Clear Lake (2022) | GPA: **3.9**

SOFTWARE PROJECT MANAGEMENT SPECIALIZATION

BACHELOR OF SCIENCE: BIOCHEMISTRY | The University of Texas at Austin (2021) | Austin, TX

COMPUTER SCIENCE (27 HRS)

- *Relevant Coursework:* Data Analytics, Graphics + Visualization, Software Engineering I-II, Bioinformatics, Software Design, Info in Cyberspace, Game Development, Project Management, Web Programming, Agile Software Development, Life Cycles, Software Testing, Configuration Management, Software Architecture, and Negotiation Strategies

PROFESSIONAL PROJECTS

Arcade Game

Collaborated with a team to develop a multiplayer arcade-style game inspired by Space Race. Implemented multiple graphical user interfaces (GUIs), user interactivity features, and a high-score leaderboard using Processing.

Adventure Game

Developed a Zork-like text-based adventure game in Python. Enabled player navigation through a blueprint-style map, allowing users to collect and use items throughout the game environment.

Mindfulness Website

Contributed to both frontend and backend development of a wellness website focused on promoting relaxation. Collaborated with a team to design and implement interactive features and calm user experiences.

Game Database Website

Built a comprehensive video game archive site featuring searchable information on games, platforms, and developers. Integrated external APIs and implemented database connectivity to manage and display dynamic content.

Covid Invasion Game

Designed and developed an interactive web game themed around COVID-19 using Phaser, JavaScript, and HTML. Focused on engaging gameplay and responsive user experience.

Human Trafficking Prevention Project

Supported the design and development of a project focused on preventing human trafficking. Helped create informational resources to raise awareness and provide support for vulnerable communities.

PROFESSIONAL AFFILIATIONS

e-NABLE MEMBER: 3-D printed prosthetic thumbs and collaborated to assemble the prosthetic hand

FRESHMAN RESEARCH INITIATIVE: Analyzed gold in Nanoparticles Stream

WOMEN IN COMPUTER SCIENCE: Member and participated in WiCS Hackathon