

Rudra Patel

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Education

Lewis University, Romeoville IL <i>Bachelor of Science in Computer Science, Concentration in Artificial Intelligence</i>	Expected: May 2026 <i>GPA: 3.87 / 4.0</i>
<ul style="list-style-type: none">Relevant Coursework: Data Structures and Algorithms, Object Oriented Programming, Software Engineering, Artificial Intelligence, Machine Learning, Linear Algebra, Discrete Mathematics	

Experience

Hometown Liquor <i>Freelance Software Engineer</i>	May 2025 - July 2025 <i>Braceville, IL</i>
<ul style="list-style-type: none">Increased monthly revenue by 45% to \$40,000 by developing and deploying a full-stack e-commerce platform using React, TypeScript, FastAPI, and PostgreSQL for 750+ productsRaised customer conversion rate by 25% by designing a mobile-first UX with search-optimized product discovery built on indexed queries achieving sub-200ms response timesAchieved 99.9% backend reliability by implementing 35+ RESTful FastAPI endpoints with Supabase PostgreSQL, modular routing, input validation, and automated testingReduced database load by 30% by integrating Zustand-based global state management that eliminated redundant API calls and synchronized cart data in real time	

QuizMaster <i>Lead Developer (Capstone)</i>	August 2025 - Present <i>Romeoville, IL</i>
<ul style="list-style-type: none">Led 4-person team in refactoring a 30,000-line production React application, cutting load times by 83% (886ms to 147ms) and reducing codebase complexity by 33%Optimized Firebase backend reducing API calls by 70% and dashboard load times by 6x (under 5 seconds) through query batching and intelligent caching strategiesImproved scalability by migrating business logic from 40+ components into a modular service layer, accelerating feature development velocity by 40%	

Projects

ExoViz <i>React, TypeScript, Java, Python, PostgreSQL, Docker</i>	October 2025 - Present
<ul style="list-style-type: none">Built a full-stack platform that visualizes 5,000+ NASA exoplanet records with AI-driven habitability scoring and interactive 3D rendering using Three.jsDesigned a 3-service microservices backend using Spring Boot, FastAPI, and Redis to reduce query latency by 70% and improve database efficiencyDeveloped an ML classification pipeline using Scikit-learn to predict planet habitability with 82% accuracy, deployed as a standalone microserviceImplemented a Three.js 3D visualization engine achieving 60fps performance through instanced rendering and level-of-detail optimizations	

MasterChef Claude <i>React, Claude API, Tailwind CSS, Firebase, Docker, AWS</i>	April 2025 - May 2025
<ul style="list-style-type: none">Built an AI-powered recipe platform using Claude API and React that delivers custom recipes within 5 seconds through optimized prompt engineering and asynchronous request handlingImplemented 3-layer error handling with input validation and real-time feedback, ensuring 99% successful API response rateSimplified deployment with Docker containers and automated CI/CD pipeline on AWS, reducing deployment time by 80%	

Skills

Languages: Python, Java, JavaScript/TypeScript, C/C++, SQL, HTML/CSS

Frameworks: React, Spring Boot, FastAPI, Node.js, Express.js, Tailwind, Bootstrap

Cloud/DevOps: AWS, GCP, Azure, Docker, CI/CD, GitHub Actions

ML/Data: Scikit-learn, TensorFlow, NumPy, Pandas, Matplotlib, Data Visualization

Databases: PostgreSQL, MongoDB, Redis, Firebase, MySQL

Tools/Concepts: Git, Agile, System Design, REST APIs, Microservices, JWT Authentication