RANI SARO

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EDUCATION

University of California, Davis Sept. 2023 – Dec. 2025
Bachelor of Science in Computer Science

Grossmont College Sept. 2021 – June 2023
Associate in Science for Transfer in Computer Science

EXPERIENCE

Software Engineer *(Part-Time, 15 hrs/week)* | *ASUCD Innovation & Research Lab* Oct. 2024 – Present
- Built a data visualization platform for UC Davis, processing **7M+** PostgreSQL records into transportation insights
- Led a team of 4 engineers and 1 designer, coordinating development and ensuring seamless API integration
- Designed and deployed a Flask backend with **30+** API endpoints, reducing data processing time by **40%**
- Migrated PostgreSQL to AWS EC2, halving query time to **200ms** with better CPU/RAM and tuning

Software Engineer Intern *(Part-Time, 10 hrs/week)* | *AggieWorks* Oct. 2024 – Present
- Developed **DavisCattlelog**, a course recommendation tool with **9,000 +** unique visitors using Vite and FastAPI
- Engineered a responsive React and Tailwind UI with search and filtering, garnering over **300,000** page views
- Optimized data fetching with caching, reducing API calls and cutting data load times by **300%**

Software Developer Intern | *CodeLab* Oct. 2023 – June 2024
- Created Espresso, a web app merging Quizlet's UI with Anki's algorithm to aid UC Davis students' study habits
- Worked within an 8-person Agile team, coordinating via Jira and Slack to track progress and resolve issues
- Implemented React components and REST API endpoints in Express.js, completing **2+** tickets per week
- Reduced frontend load times by **30%** through reducing unused JavaScript and CSS to decrease file sizes

PROJECTS

Co-Draw | *Java, Spring Boot, Svelte*
- Architected a real-time whiteboard using Svelte and Spring Boot, enabling drawing and erasing via WebSockets
- Leveraged Spring WebSocket with the STOMP subprotocol to facilitate low-latency, bidirectional messaging
- Containerized app with Docker, reducing deployment time by **30%** and ensuring consistent environments

Scrappy | *Typescript, Next.js, Supabase*
- Developed a task board app for **+80 users** with real-time sync via Supabase and version control using Git
- Improved performance by **40%** using SSR and client-side caching, reducing re-renders with Next.js best practices

Occurrence Trivia | *Typescript, Next.js, Tailwind, Firebase*
- Launched a full-stack trivia app with Firebase and Next.js, enabling real-time database interaction for **150+** users
- Integrated Firebase Authentication with OAuth 2.0 for seamless, secure logins with **100%** uptime
- Introduced a daily challenge with a scoring system and leaderboard, increasing repeat engagement by **55%**

Detecting Heart Disease with Supervised Learning | *React, Python, Jupyter Notebook*
- Trained a random forest model in Jupyter, achieving **94%** accuracy via feature selection and preprocessing
- Mentored 2 developers to design & integrate React-FastAPI interface in **2 weeks**, ensuring seamless functionality

TECHNICAL SKILLS

Languages: Python, Typescript, Javascript, Java, SQL (Postgres), C++, HTML/CSS
Frameworks: React, Node.js, Flask, FastAPI, Next.js, Express.js, Spring Boot, Svelte
Developer Tools: Git, Docker, AWS, Postman, Prisma, SQLAlchemy, MongoDB
Libraries: Tailwind CSS, Firebase, Supabase