

RANI SARO

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EDUCATION

University of California, Davis
Bachelor of Science in Computer Science

Sep 2023 – Dec 2025

EXPERIENCE

- Lead Engineer** | ASUCD (Part-Time, 15 hrs/wk) Oct 2024 – Present
- Developed REST API for transit analytics, querying **7M+** PostgreSQL records with sub-200ms latency
 - Led roadmap, sprints, code reviews for a 5-person team, shipping stat summary and peak analysis features on time
 - Built Flask backend (**20+ endpoints**) on AWS EC2 with optimized dependencies, reducing Docker images by **55%**
 - Designed query routing system using **5-digit codes** to map user requests to parameterized SQL templates
- Software Engineer Intern** | AggieWorks (Part-Time, 10 hrs/wk) Oct 2024 – Present
- Developed a **course search engine**, built ETL pipelines using PySpark and Playwright, extracting **242K+** reviews
 - Scaled product to **+550k** views and **14K+** unique users by building site using Vite, FastAPI and Oracle Cloud
 - Optimized fetching with TanStack Query and Cloudflare caching, reducing API calls and cutting load times by **11x**
- Software Developer Intern** | CodeLab Oct 2023 – Jun 2024
- Created a web app with a spaced-repetition engine (SRS) backend, to aid students' study habits
 - Partnered with designers to implement features from Figma wireframes using TypeScript, Tailwind and React.js
 - Supported **+33k** users by implementing React components and REST API endpoints in Node and Express.js

PROJECTS

- Sixth-Degree** | Go, TypeScript
- Architected a Go backend to visualize BFS shortest paths on **10k+ node graphs**, streaming traversal via WebSockets
 - Built a concurrent Go pipeline with worker pools to process 10k+ Wikipedia pages into a graph in **~3.4 minutes**
 - Deployed a minimal, secure **~5 MB Docker image** to Google Cloud Run via a CI/CD pipeline in GitHub Actions
 - Resolved a **5-minute P95 latency to 15s** under a 500-user load by re-architecting the WebSocket data pipeline
- Scrappy** | Typescript, Next.js, Supabase
- Engineered a real-time task board, achieving **80% adoption** among 90 UC Davis Hacknight members in 5 weeks
 - Supported **20+ concurrent sessions** using Supabase Realtime and query optimizations for low-latency updates
 - 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
 - Leveraged Firebase Authentication with OAuth 2.0 for a secure and seamless social sign-on experience for users
 - Introduced a daily challenge with a scoring system and leaderboard, increasing repeat engagement by **55%**

TECHNICAL SKILLS

Languages: Go (Golang), Python, Typescript, Javascript, Java, SQL (Postgres), C++, HTML/CSS

Frameworks: React, Node.js, Flask, FastAPI, Next.js, Express.js

Developer Tools: Git, Github Actions, Docker, AWS, EC2, Lambda, Google Cloud, Postman, Prisma, MongoDB

Libraries: Tailwind CSS, Firebase, Supabase