

SAKSHAM RAI

(408) 513-5080 | s1rai@ucsd.edu | sakshamrai2001.netlify.app | linkedin.com/in/sak2001 | github.com/sakshamrai101

Education

University of California San Diego | La Jolla, California

October 2020 – June 2024

- **Degree:** BS. Mathematics-Computer Science, Double Minor – Cognitive Science (ML Focus), Innovation and Entrepreneurship
- **Academic Achievements:** Departmental Provost Honors (x6), Sophomores Honors Program (x1), Blackstone Launchpad Program.
- **Associations:** CSForEach, Engineers for Exploration, UCSD Speech and Debate, The Basement Entrepreneurs Program and UCSD Cricket Team.
- **Relevant Coursework:** Web-Client Technologies, Software Engineering, Algorithms and Data Structures, Object Oriented Design, Computation, Systems Programming, Unsupervised Machine Learning, AI Algorithms, Product Innovation and Venture Finance (GPA: 3.7)

Skills

Languages: Python, JavaScript, Java, C, Typescript, PHP, CSS and HTML

Frameworks/Databases/Tools: React, Next.js, Vue.js, Flask, MySQL, PostgreSQL, MongoDB and Git/Github

Experience

Software Engineer | Los Angeles County | React, Node.js, MongoDB, Js

October 2024 – Present

- Developing a web-based drug distribution platform for Los Angeles County's Homeless Outreach Program, enabling 8,000+ users to securely register and access anti-opioid kits through 21 automated vending machines in SPA 6 zone.
- Implementing a secure user registration system using MongoDB and JavaScript, ensuring privacy standards for demographic research.
- Building an API service to automate unique ID generation and update real-time vending machine inventory, integrating this data into a user-friendly dashboard with an embedded Google Maps widget – boosting overall Naloxone Kit access/sales.
- Created a registration portal to onboard potential partners for NAP site installations and automating month-end data dump in exported CSV files for demographic analysis and county reporting.

Software Engineer | San Diego County | React, Node.js, Postgres, Js, MySQL, PHP

June 2023 – Jan 2024, September 2024 – Present

- Built an SEO-optimized website using HTML, CSS, and JavaScript, integrating a secure PHP/MySQL registration system that onboarded 3500+ users in 4 months.
- Automated data transfers from 12 anti-opioid machines and 6 NAP sites to UCSD and developed a portal for Naloxone reversals, onboarding 14 collaborators for streamlined reporting.
- Engineered a React-based frontend portal and Node.js backend to parse and display real-time Naloxone Reversal Drug data, enhancing query performance through PostgreSQL.
- Implemented a backend synchronization pipeline using Chokidar to automate updates from standardized Excel sheets to the PostgreSQL database, ensuring minimal latency and accurate results.
- Built RESTful APIs to securely fetch and integrate drug data with the frontend, enabling real-time retrieval and improving data accessibility for stakeholders.

Software Engineer Intern | AfyaChat | Flask, React, Python, Twillio, GPT 3.5, Llama Index

March 2024 – April 2024

- Designed and implemented an AI-based eConsultation platform to minimize delays between Primary Care Physicians (PCPs) and specialists, reducing response times by 50%.
- Developed three microservices powered by GPT-3.5 and Llama Index for missing checklist detection, targeted question generation, and evidence-based recommendations.
- Built a Retrieval-Augmented Generation (RAG) pipeline with Llama Index, enabling accurate, context-specific data retrieval and near-instantaneous query response times.
- Utilized Twilio to facilitate real-time text message notifications for the PCP for each microservice.
- Preprocessed 7 years' worth of chat history between PCPs and Specialists to generate responses, achieving 90% accuracy in providing medically sound recommendations (specialist verified).

Team Lead | DevSurf | Node.js, MongoDB, Js, CSS, HTML

April 2024 – June 2024

- Spearheaded the development of DevSurf, a developer journal web-app enabling software professionals to track project progress and document key milestones.
- Designed user-friendly wireframes and developed a dynamic landing page featuring project widgets and a radar chart that visualized skill metrics based on project tags.
- Built a scalable backend in Node.js and MongoDB, integrating secure user authentication and robust data persistence to handle project CRUD operations, milestone-task relationships, and dynamic progress tracking.
- Led sprint planning and review meetings, ensuring alignment with user feedback and achieving on-time delivery of all project milestones.
- Optimized development processes by building a CI/CD pipeline to automate workflows for testing, formatting, and deployment, improving team efficiency by 30%.

Impact – Driven Projects

Founder | GymScout | Node.js, React, MongoDB, Typescript

December 2024

- Engineered a full-stack platform integrating Google Maps API for location-based gym discovery, enabling dynamic searches and filtering with sub-200ms response times.
- Optimized API calls and database interactions, reducing latency by 60% while managing over 1,000+ gym data entries.
- Designed a modular, responsive React frontend to deliver a seamless user experience across devices.

Founder | Karya – Productivity | Node.js, React, MongoDB, Python, JS

April 2023 – January 2024

- Co-founded an AI-powered productivity SaaS at UCSD's The Basement; secured off-cycle recruitment.
- Developed Karya's UI prototype with Uizard and launched an engaging product website, highlighting the company vision and key product features.
- Spearheaded MVP development using React, Node.js, and MongoDB, amassing 50+ beta testers.
- Optimized LLM models (DistilBERT and GPT-3) to create short actionable To – Dos and integrating them with the existing google calendar.