

SAKSHAM RAI

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Education

University of California San Diego | La Jolla, California

October 2020 – June 2024

- **Degree:** BS. Mathematics-Computer Science, Double Minor – Cognitive Science, 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.

Experience

Software Engineer | County of Los Angeles | Node.js, MySQL, JS, CSS, HTML

October 2024 – Present

- Developing a drug distribution platform for Homeless Outreach Program: Integrated Care System for the Los Angeles County.
- Engineering a secure registration system using MySQL and JavaScript to onboard 8,000 + users.
- Automating an API service to generate and distribute unique user- IDs from 21 vending machines - to access anti-opioid kits in SPA 6.
- Creating a dashboard for Naloxone reversals and potential NAP site reporting – to onboard potential collaborators.

Software Engineer | County of San Diego | MySQL, PHP, phpMyAdmin, JS, Python

September 2024 – Present

- Engineering a dashboard for the Drug Checking Program to display vending machine analytics for checked-out drug kits.
- Developing a platform to display the analytics report of the onboarded users from the current month.
- Automating the transfer of the generated analytics report to the program coordinators monthly.
- Revamping the alternate HRSCD website to generate 25% more leads on the official drug distribution platform.

Team Lead | DevSurf | Node.js, SQLite, JS, CSS, HTML

April 2024 – June 2024

- Led the creation of DevSurf; an interactive developer journal web app that allows developers to create, edit and store journal entries about their work.
- Coordinated efforts among 12 developers, including a successful mid-quarter app pivot, based on professor and user feedback - all while ensuring timely delivery of project milestones in a fun collaborative environment.
- Developed secure backend functionalities for user registration using Node.js and SQL Lite, project widget CRUD operations, and frontend design for the home page.
- Optimized code across all modules, including writing pipeline code for automated GitHub workflows, documentation generation, unit testing, and formatting.

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

March 2024 – April 2024

- Developed an AI-based platform to reduce lag time in eConsultation between Primary Care Physicians and Specialists.
- Utilized GPT 3.5 and Lama Index to generate 3 separate microservices: finding missing info in eConsult, generating targeted questions and evidence-based recommendations.
- 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).
- Presented the application at the inaugural Afya Hackathon Demo-Day to the Founder and CTO, earning runners-up recognition.

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

April 2023 – Present

- Co-founded an AI-powered productivity SaaS startup 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.
- Spearheading MVP development using React, Node.js, and MongoDB, amassing 50+ beta testers.
- Optimizing LLM models like DistilBERT and GPT-3 for strategic academic planning.

Software Engineer Intern | San Diego Police County | MySQL, PHP, phpMyAdmin, JS, CSS, HTML

Dec 2022 – June 2023

- Developed an SEO-optimized website for HRCSD's Naloxone Program using HTML, CSS, and JavaScript.
- Engineered a secure registration system via PHP and MySQL; onboarded 3500+ users in 4 months.
- Automated data transfers from 12 anti-opioid machines and 6 NAP sites to UCSD.
- Established a portal for Naloxone reversals and potential NAP site reporting, onboarding 14 collaborators.

Software Engineer Intern | Black Logics

Sept 2022 – Dec 2022

- Overhauled BlackLogics' website pre-production, enhancing visuals and interactivity using Figma, CSS, HTML, and Js.
- Boosted SEO with faster loading speeds through image minimization, browser caching, and keyword optimization.
- Implemented SSL certification and fortified server-side input validation to ward off SQL injections.

Projects

Moon-Markers 2.0 | Nasa Space Apps 2023 Hackathon | Three.js, React, Flask, Python, Javascript

October 2023

- Developed a 3D moon visualization using NASA's CGI Moon Kit with React and Three.js.
- Integrated Flask and Python with JavaScript for dynamic data visualisation of the Apollo Seismic Event Catalogue.

Talk – To - Abel | SDX – AI Hackathon 2023 | GPT – 4, Typescript, React, Node.js

August 2023

- Developed a multi-language educational speech bot using Open Ai's GPT-4, TypeScript, React, and Node.js; ranked in the top 10 projects.
- Implemented real-time voice chat via WebSocket, bolstered with Zustand state management for secure, two-way interactions with Abel.