

Nikhil Akiti

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EDUCATION

University of California, San Diego

B.S. Computer Science — GPA: 3.6

Sep. 2023 – Jun. 2027 (Expected)

- Regents Scholar (Awarded to top 1% of students) - University of California Honors Program
- Coursework: Data Structures, OOP, Operating Systems, Analysis of Algorithms, Software Engineering, Machine Learning

EXPERIENCE

Student Software Engineer

University of California, San Diego - IT Services

May 2025 – Present

La Jolla, CA

- Executed a major version upgrade of JupyterHub platform, orchestrating the deployment on Kubernetes using Helm/Helmfile and Docker, enhancing security for 5000+ students by patching legacy CVEs
- Resolved migration failures during JupyterHub upgrade, including function conflicts and a refactor of the legacy Jinja2/Bootstrap front-end, ensuring 100% feature compatibility and UI consistency.
- Automated Python SonarQube integration into Bamboo CI/CD pipeline using custom Bash scripts for environment setup, SSL configuration, and authored clear internal documentation to support maintainability
- Integrated a Python API client to centralize error handling across 15+ service endpoints, reducing code duplication by 50%
- Collaborated in an agile environment with a team of 10 engineers, participating in bi-weekly stand-ups code reviews

Undergraduate Research Assistant

University of California, San Diego

Oct 2023 – Jun 2024

La Jolla, CA

- Co-authored the paper "Generic Refinement Types", by implementing and debugging a modified Rust object-relational mapping library that added generic refinements to functions and types
- Built web apps using the Rocket.rs web framework, Diesel ORM, and PostgreSQL that implemented CRUD functionality, JSON data, and cookies that served as testbeds for the refinement type checker
- Migrated 3 web applications developed in Haskell to Rust and navigated differences in programming structures by rewriting monadic error handling to leverage Rust's native Result and Option types for improved safety.

PROJECTS

Fundraising CRM | | React JS, Next.js, Node.js, Express, MySQL, Azure, Axios, Tailwind CSS, TypeScript, Zustand, Zod

- Architected a multi-tenant SaaS platform, implementing 40+ RESTful API endpoints and 15+ table MySQL schema with Sequelize and controller/service/repository/model pattern to enforce tenancy.
- Engineered frontend using Next.js + TypeScript, using TanStack Query to manage server state and reduce data-fetching boilerplate by 90%, and built 50+ reusable components for modular UI.
- Designed a robust security model with JWT authentication and RBAC authorization middleware, ensured 100% transaction integrity with Stripe, and deployed the application using Azure cloud services.

Claimable AI | | React JS, Next JS, Node.js, Express, MySQL, Tailwind CSS, Azure Web Apps, Axios, OpenAI API

- Developed an agentic full-stack medical insurance appeals platform featuring document processing, appeal letter generation, and a user dashboard for managing insurance claim appeals
- Implemented AI integration with OpenAI GPT-4 to automatically extract data from denial letters (PDFs and images), generate appeal letters, and provide chat assistance for users with a context-aware chatbot
- Built a backend architecture with MySQL database, JWT authentication, rate limiting middleware, file upload capabilities, and Azure Blob Storage, all deployed on Azure Web Apps

Mash | React JS, Node.js, Express, MySQL, Tailwind CSS, Axios, Heroku

- Developed a dataset ranking platform (Elo algorithm) that scaled organically to 50,000+ visits and 500+ registered users, demonstrating product-market fit and system scalability.
- Architected the backend using Node.js and Express to support a RESTful API, secure user authentication with JSON web tokens/cookies, and CRUD functionality for user-generated datasets

SKILLS

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

Frameworks/Libraries: ReactJS, React Native, NodeJS, NextJS, ExpressJS, MySQL, Diesel, Rocket, Tailwind CSS, BeautifulSoup, Socket.io, Axios, Expo, Open AI API, Sequelize, Zod, TanStack Query, Stripe, Zustand

Tools: Git, Bash, VS Code, Azure, Bamboo, BitBucket, Docker, Kubernetes, Vim, Cursor, Jira