

# Nikhil Akiti

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## EDUCATION

### University of California, San Diego

Sep. 2023 – Jun. 2027 (Expected)

*B.S. Computer Science — GPA: 3.6*

- 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

May 2025 – Present

*University of California, San Diego - IT Services*

*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

Oct 2023 – Jun 2024

*University of California, San Diego*

*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