

Omar Rafiq

omarrafiiq@gmail.com | linkedin.com/in/omarrafiiq/ | github.com/omarraf | omarrafiiq.dev

Education

BS in Computer Science | California State University, Fullerton

May 2026

Experience

Undergraduate Research Engineer

May 2025 – June 2026

University of Iowa

- Built full-stack mobile apps in Java/Kotlin to automate wearable sensor data ingestion for a 50+ person user study funded by Google and NSF
- Implemented a multi-stage LLM pipeline with output schemas and guardrails to generate personalized health insights
- Designed a scalable NoSQL database using Firebase optimizing storage and retrieval for 10,000+ daily health metrics.
- Saved \$5,000+ in hardware costs by expanding the platform to iOS, enabling participants to use personal devices

Software Engineer Intern

Sep. 2025 – May 2026

SonarX

- Led end-to-end development of an agent pipeline using LangGraph to monitor 10+ blockchain repositories and detect breaking protocol changes before they impact SLAs
- Built a 100-entry benchmark dataset from scratch to evaluate breaking change classification, achieving 90% accuracy across protocol update categories
- Implemented a human feedback loop via Slack reaction signals to continuously retrain the classifier and reduce false positive alerts

Open Source Contributor

Nov. 2024 – Present

JetBrains/Koog, Open Energy Dashboard

- Extended the core message model of Koog, JetBrains' open-source Kotlin AI-agent framework, to support multimodal tool results (images/files), implementing handling across the Anthropic, OpenAI, and Gemini clients ([PR #1852](#))
- Fixed silent tool-call failures in Koog's Anthropic and Bedrock clients by propagating error status to the model, enabling agents to detect and recover from failed tool executions ([PR #1700](#))
- Built a reusable parameter-validation test framework and 22 test suites (Mocha/Chai, ~8,700 LOC) covering every server route in OED, an open-source energy platform with 100+ contributors ([PR #1528](#), [PR #1503](#))

Software Engineer Intern

May 2024 – Sep. 2024

The Masjid App

- Built prayer timetable system using TypeScript and React to help thousands of mosques worldwide manage schedules
- Optimized state management and API integration patterns, reducing page load times and improving app performance

Projects

Transport Planner | Typescript, React, Node.js, Express, Docker

[Github](#) | [Live Demo](#)

- Developed a full-stack platform to provide real-time carbon cost analysis for multi-modal transportation routes
- Built REST APIs with geocoding, route calculation, and metrics endpoints with error handling and rate limiting
- Containerized with Docker and established CI/CD pipeline with automated testing and deployment via GitHub Actions

Cloud File Storage App | Python, Amazon Web Services

[Github](#)

- Built and deployed a fully serverless backend using Lambda, API Gateway, DynamoDB, and Cognito, adding secure authentication, file management, and AI-driven summarization powered by Amazon Bedrock.
- Implemented Infrastructure as Code using CloudFormation to deploy and manage 10+ AWS resources.

DayChart | Typescript, React, Tailwind CSS, Firebase, Vercel

[Github](#) | [Live Demo](#)

- Developed a scheduling app with React and Firebase, acquiring **100+** registered users.
- Engineered a serverless Firebase backend using OAuth for secure auth and Firestore for real-time data persistence.

Skills

Programming Languages: Python, TypeScript, JavaScript, Java, C++, Go, SQL, Kotlin

Frameworks & Libraries: React, Next.js, Node.js, FastAPI, Flask, Spring Boot, Express

Cloud & Tools: AWS, Google Cloud Platform, Azure, Docker, Git, Postman, Terraform, Linux