Omar Rafiq

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Education

California State University, Fullerton – BS in Computer Science   **Expected Graduation**: May 2026
Relevant Coursework: Operating Systems, Software Engineering, Machine Learning, Computer Networking, Databases

Experience

Software Engineer (Capstone)   September 2025 - May 2026
SonarX - Blockchain Startup
- Building AI agent that monitors blockchain protocol upgrades using NLP classification and RAG to deliver proactive Slack alerts before potential breaking changes

Research Engineer   May 2025 – Dec. 2025
University of Iowa - PI: Dr. Lucas Silva
- Built data pipeline in Java to process and sync health metrics from wearable devices for real-time dashboard visualization across 50+ person user study, funded by Google and NSF
- Engineered a context-aware GenAI assistant using Claude Sonnet to transform raw sensor data into practical insights.
- Designed a scalable, privacy-first Firestore schema optimizing storage and retrieval for 10,000+ daily health metrics.
- Expanded development to iOS (Swift), enabling users to use personal devices and reducing costs by over $5,000

Open Source Contributor   Nov. 2024 – Present
Open Energy Dashboard
- Increased Express API test coverage by 15% by implementing unit/integration test suites using Mocha and Chai.
- Hardened 20+ API endpoints with input validation and sanitization, mitigating injection and XSS attacks.
- Introduced a new test framework to standardize parameter validation in a codebase with 100+ contributors'

Software Engineer Intern   May 2024 – Sep. 2024
The Masjid App
- Built prayer timetable system serving thousands of mosques wordwide using TypeScript and React
- Owned full SDLC for major feature; from requirements, system design, implementation, testing, and deployment
- Optimized state management and API integration patterns, reducing page load times and improving app performance

Projects

Transport Planner | Typescript, React, Node.js, Express, Docker   Live Demo
- 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

Document Storage App | Python, Typescript, Amazon Web Services   Github
- Designed a fully deployed serverless backend using AWS Lambda, API Gateway, and DynamoDB to handle secure authentication (Cognito) and file management.
- Implemented Infrastructure as Code using CloudFormation to deploy and manage 15+ AWS resources.

Web Crawler | Go, Goroutines, SQL
- Implemented concurrent web crawler using goroutines to crawl, index, and persist website metadata to SQL database
- Optimized request scheduling with rate limiting and error handling with retry logic for scalable scraping of 1K+ pages

Skills

Programming Languages: Python, TypeScript, JavaScript, Java, C++, Go
Frameworks/Libraries: React, Next.js, FastAPI, Flask, Spring Boot, Express
Cloud & Tools: AWS, Google Cloud Platform, Docker, GitHub, Postman