

Nayef Jaber

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Education

California State University, East Bay

Expected May 2028

B.S. in Computer Science, Minor in Information Technology (GPA: 3.9 / 4.0)

Hayward, CA

- **Relevant Coursework:** CS 201 - Computer Science II, CS 301 - Data Structures and Algorithms, CS 211 - Discrete Structures, CS 311 - Programming Language Concepts, CS 351 - Web Development, CS 401 - Software Engineering, CS 421 - Operating Systems, CS 441 - Computer Networks, CS 321 - Computer Architecture, CS 221 - Computer Organization and Assembly Language, CS 411 - Automata and Computation

Experience

Computer Science Workshop Facilitator

April 2026 – Jul 2026

SMASH Academy

UC Berkeley

- Mentored approximately 25 scholars through project-based **Python** and introductory **AI** programming challenges, helping students debug errors, test solutions, and apply structured problem-solving techniques.
- Explained foundational CS and software engineering concepts such as **control flow**, **functions**, **state**, and problem decomposition in beginner-friendly ways.
- Collaborated with lead facilitator to support technical setup, troubleshoot coding issues, track scholar progress, and keep workshop activities organized across in-person and virtual programming sessions.

Freelance Full-Stack Web Developer

Jan 2026

Ace's Garage Door

Remote

- Designed and deployed a production website using **JavaScript**, **jQuery**, **HTML**, and **CSS**, delivering a responsive client-facing experience focused on performance, usability, and maintainability.
- Integrated frontend functionality with **backend services** and third-party tools while collaborating directly with the client to gather requirements, iterate on features, and ship updates in a remote freelance environment.

Projects

Multi-Tenant SaaS Backend API 🚀

TypeScript, Express.js, PostgreSQL, Prisma, Redis, Docker, Jest

- Developed a production-style **multi-tenant SaaS backend API** using **TypeScript**, **Express.js**, **PostgreSQL**, and **Prisma**, with tenant-scoped data models and RESTful service architecture.
- Implemented secure **JWT authentication**, **role-based access control**, protected routes, middleware-driven request validation, and rate limiting to strengthen API security.
- Integrated **Redis** caching, **Dockerized** local development, and automated API testing with **Jest** and **Supertest** to improve reliability and maintainability.

Async Document Processing Search API 🚀

Python, FastAPI, PostgreSQL, SQLAlchemy, Redis, Celery, Docker, Pytest

- Built a backend document processing API using **Python**, **FastAPI**, **PostgreSQL**, and **SQLAlchemy**, supporting authenticated file uploads, metadata storage, and searchable processed content.
- Designed relational models for **users**, **documents**, **processing jobs**, and **text chunks**, using **Alembic** migrations to manage database schema changes.
- Implemented asynchronous background processing with **Redis** and **Celery**, plus **Docker Compose**, **Pytest** integration tests, and auto-generated **OpenAPI** documentation.

High-Performance Worker Queue 🚀

Go, Goroutines, Channels, Context, WaitGroup, Concurrency

- Engineered a **concurrent worker queue** in **Go** using **goroutines**, **channels**, and buffered job queues to process asynchronous tasks with configurable parallelism.
- Designed a **dispatcher architecture** for job scheduling, worker coordination, backpressure handling, and safe task distribution across multiple concurrent workers.
- Implemented graceful shutdown using `context.Context` and `sync.WaitGroup`, preventing **goroutine leaks** and ensuring reliable job completion under load.

Technical Skills

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

Frameworks/Libraries: Spring Boot, Spring Security, Spring Data JPA, FastAPI, SQLAlchemy, Express.js, React.js, Prisma

Tools: Git/GitHub, Codex, Claude Code, VS Code, Docker, Redis, Kafka, Pytest, JUnit, Testcontainers, Maven, OpenAPI

Databases: PostgreSQL, MongoDB, MySQL, SQLite