

Hadi Chebbo

Software Engineer

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Profile

Computer Science graduate and Software Engineer with experience designing scalable backend systems, REST APIs, distributed architectures, and AI-powered applications. Strong foundation in object-oriented design, database systems, software quality, and modern backend engineering. Experienced working with Laravel, Node.js, PostgreSQL, and Agile development practices while building reliable and maintainable software.

Professional Experience

Software Engineering Trainee, Forward MENA (OnRamp Program) Jun 2026 – Sep 2026

- Designed and developed backend applications using **Node.js**, **Express.js**, and **PostgreSQL**, applying clean architecture, REST API design, authentication, middleware, and database optimization principles.
- Applied software quality engineering practices by designing test cases, validating REST APIs, and implementing unit testing, integration testing, regression testing, and Test-Driven Development (TDD) concepts to improve software reliability.
- Built distributed backend architectures using **Redis**, **BullMQ**, WebSockets, and Server-Sent Events to support asynchronous processing, background jobs, and scalable real-time systems.
- Designed and implemented Retrieval-Augmented Generation (RAG) pipelines, including document processing, chunking, embedding generation, vector search, and Large Language Model (LLM) integration for semantic question answering.
- Worked in Agile development environments using Git, pull requests, code reviews, OpenAPI/Swagger documentation, and AI-assisted development tools to deliver maintainable and production-ready software.

Full-Stack Development Intern, YoubeeAi Aug 2025 – Nov 2025 | Remote

- Migrated several AJAX-driven pages to Laravel Livewire, reducing JavaScript complexity and improving maintainability.
- Built full-stack Livewire components with dedicated controllers, routes, and Blade views for core clinic management features.
- Collaborated with the team on backend business logic and optimized MySQL queries for data-intensive clinic workflows.

Backend Development Intern, XpertBot Dec 2024 – Mar 2025 | Remote

- Designed and built RESTful APIs using Laravel Sanctum, handling authentication, token management, and secure endpoint authorization.
- Implemented role-based access control (RBAC) for multi-user systems, separating permissions across admin, staff, and client roles.
- Modeled relational MySQL schemas with proper indexing and Eloquent ORM relationships, improving query performance on high-read endpoints.
- Participated in code reviews and maintained clean version history using Git branching strategies.

Projects

Platera — Full-Stack Restaurant Discovery Platform Jul 2026 – Aug 2026

Node.js · Express.js · React · PostgreSQL · pgvector · Redis · WebSockets · Ollama

- Designed and implemented backend services for the restaurant discovery platform using **Express.js**, **Sequelize**, **PostgreSQL**, and **Zod**, including API structure, validation, database interactions, and service-level business logic.
- Built the platform's **AI-powered restaurant assistant**, integrating LLM capabilities with application data to support natural-language restaurant discovery and recommendations.
- Implemented the AI retrieval pipeline using **document processing**, **embeddings**, **PostgreSQL/pgvector**, and **Ollama**, enabling the assistant to retrieve relevant restaurant information before generating responses.
- Developed the **real-time AI Chef interface** using WebSockets, connecting the frontend interaction with the backend AI workflow and streaming conversational responses.
- Integrated **Redis** into the backend architecture for supporting scalable application workflows and AI-related processing.
- Applied modular architecture, API validation, authentication, database modeling, and automated testing to keep the system maintainable and reliable.

Distributed RAG Framework Jul 2026 – Jul 2026

TypeScript · Fastify · BullMQ · Redis · PostgreSQL · Prisma · Qdrant · Docker

- Designed and implemented a distributed microservices architecture for web crawling, intelligent scraping, and Retrieval-Augmented Generation (RAG) using an event-driven processing pipeline.
- Built independent services for crawling, scraping, document processing, embedding generation, and AI query retrieval, communicating asynchronously through BullMQ and Redis queues.
- Developed a complete RAG ingestion pipeline including document cleaning, chunking, embedding generation, metadata storage in PostgreSQL, and vector storage in Qdrant for semantic search.
- Implemented AI-powered question answering by generating query embeddings, retrieving relevant context through vector similarity search, and integrating Large Language Models (LLMs) for grounded responses.
- Containerized the platform with Docker and designed fault-tolerant background workers using retry mechanisms, scalable queues, and separation of responsibilities.

Guidely — Backend Team Lead (TechTalks Internship) Apr 2026 – May 2026

Laravel · PostgreSQL · Railway · Neon · REST APIs · Jira
[www.guidely.store](#)

- Led backend development of a collaborative full-stack platform, coordinating architecture decisions, task planning, code reviews, and Agile sprint execution within a Scrum environment.

- Designed and implemented scalable REST APIs and backend services following clean architecture and clean code principles, while enforcing backend standards across the codebase
- Built and managed a staging environment on Railway connected to a shared Neon PostgreSQL database, enabling synchronized development and integration with a Next.js frontend team
- Implemented automated API test cases to improve reliability and reduce regressions, while producing technical documentation including API docs, planning documents, and meeting notes

Technical Skills

- **Programming Languages:** Java, TypeScript, JavaScript, PHP, C/C++
- **Backend Development:** Node.js, Express.js, Fastify, Laravel, REST APIs, Laravel Sanctum
- **AI & Data:** Retrieval-Augmented Generation (RAG), LLM Integration, Embeddings, Vector Search, Qdrant
- **Database Management:** PostgreSQL, MySQL, Prisma, Sequelize, Database Design, ER Modeling
- **Testing & Quality:** Postman, API Testing, Unit Testing, Integration Testing, Test Case Design, TDD
- **Distributed Systems:** BullMQ, Redis, Microservices, Event-Driven Architecture, WebSockets
- **Tools:** Git, GitHub, Postman, Jira, Railway, Neon

Education

Lebanese University, Computer Science

2024 – Jun 2026 | Beirut, Lebanon

Certifications & Recognition

- [TechTalks Internship Program – Top Performer \(2026\)](#) 
- [Java Multithreading, Concurrency & Performance Optimization — Udemy](#) 

Languages

- Arabic | Native
- English | Proficient
- French | DELF(B2)