

Jaefer Mohammed Kemal

Software Engineer — Backend Engineer — Full Stack Developer

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LeetCode | Codeforces

EDUCATION

Adama Science and Technology University

Adama, Ethiopia

B.Sc. in Computer Science and Engineering – CGPA: 3.78/4.00 (Great Distinction)

2022 – 2026

Africa to Silicon Valley (A2SV) - Coding Academy G6

Ethiopia

Competitive Programming Program

2025 – Present

- Mastered advanced data structures and algorithms, solving 400+ complex algorithmic challenges on LeetCode and Codeforces.

ALX Africa

Remote

Back-End Web Development Specialization Certificate

2024

EXPERIENCE

Impact Makers Foundation

Addis Ababa, Ethiopia

Software Engineering Intern

Jun 2025 – Sep 2025

- Led an agile sprint team of 5 developers to deliver a cross-platform Electron desktop application and a Next.js web portal.
- Designed and implemented secure JWT authentication flow, granular Role-Based Access Control (RBAC) schemas, and optimized REST APIs with NestJS and MongoDB.
- Containerized application services using Docker, standardizing development environments and eliminating configuration drift.

IE Network Solutions

Addis Ababa, Ethiopia

Software Engineering Intern

Jun 2024 – Sep 2024

- Collaborated in a 3-person team to engineer SmartRecruit, an interactive React and Tailwind CSS frontend recruitment platform.
- Engineered responsive, state-managed application dashboards featuring role-based views for HR and Management using the React Context API.
- Participated in routine agile workflows, leveraging Git-based branch management, continuous integration, and peer reviews to push production-ready code.

Bravo Trading and Engineering PLC

Addis Ababa, Ethiopia

Freelance Software Engineer

2026 – Present

- Architected, developed, and launched the company's secure, production-grade platform at bravoethiopia.et.
- Accelerated website performance and visual delivery speed by routing assets through Cloudflare CDN and writing customized caching rules.
- Built and integrated an intuitive, modular administrative dashboard and CMS, allowing seamless internal management of core business records.
- Managed production deployments using Vercel and Cloudflare.

PROJECTS

Hospital Referral Hub — Go, Python, FastAPI, PostgreSQL, Redis, XGBoost

2026

- **Project Lead:** Directed a mission-critical digital infrastructure to standardize patient referrals across Ethiopian healthcare ecosystems.
- Engineered the core Go/Gin backend to orchestrate robust State Machine workflows and an immutable medical audit trail.
- Collaborated on a Python/FastAPI ML microservice for intelligent patient severity scoring via Bio_ClinicalBERT, handling API integration and deploying the dockerized service to Google Cloud Run.
- Backend Repo: github.com/Grand-Climax/Hospital-Referral-System | ML Repo: github.com/Grand-Climax/referral_ml

Oracle AI Knowledge Base — FastAPI, pgvector, PostgreSQL, Next.js

2026

- Built an enterprise Retrieval-Augmented Generation (RAG) system utilizing Cohere embeddings and PostgreSQL with pgvector for high-speed semantic queries.
- Engineered a drop-in, asynchronous AI chat widget and a dynamic real-time metrics dashboard using Next.js to monitor user sessions.
- Frontend Repo: github.com/Jaefer-Kemal/oracle-ai-frontend | Backend Repo: github.com/Jaefer-Kemal/oracle-ai-backend

ProjeXcel (University Project Hub) — Go, Gin, GORM, PostgreSQL, Clean Architecture *2026*

- **Project Manager & Backend Lead:** Directed a 10-person capstone team to build a workflow-driven academic governance system.
- Engineered the core API using Clean Architecture and Domain-Driven Design (DDD) principles.
- Designed strict State Machine logic to enforce immutable academic project lifecycles and comprehensive audit trails.
- Backend Repo: [github.com/FinalCapstoneProjectt/backend](https://github.com/Jaefer-Kemal/FinalCapstoneProjectt/backend)

Git Tracker System — Electron, React, NestJS, MongoDB, TypeScript *2025*

- Architected a full-stack ecosystem consisting of an Electron desktop application and a NestJS backend for real-time team analytics.
- Engineered secure Inter-Process Communication (IPC) in Electron to parse local Git repository histories without relying on remote third-party APIs.
- Backend: github.com/Jaefer-Kemal/GTracker-backend | Desktop: github.com/Jaefer-Kemal/GTracker-Desktop | Frontend: github.com/Jaefer-Kemal/GTracker-frontend

Inventory Management System (IMS) — Django, DRF, PostgreSQL, JWT *2024*

- **ALX Backend Capstone:** Delivered a robust RESTful API suite to manage complex multi-warehouse physical stock transfers.
- Designed an immutable audit logging system to record exact historical snapshots of purchase orders, sales, and stock movements.
- Secured sensitive financial and administrative endpoints using granular Role-Based Access Control (RBAC) via JWTs.
- Backend Repo: github.com/Jaefer-Kemal/Inventory-Management-API

TECHNICAL SKILLS

Languages: Go, Python, TypeScript, JavaScript, SQL, C/C++.

Backend Frameworks: Gin, FastAPI, Django REST Framework, NestJS, Express.js, Flask.

Databases & Storage: PostgreSQL, MongoDB, Redis, pgvector.

Cloud & DevOps: Docker, Google Cloud Run, GitHub Actions, Linux, Cloudflare, Vercel.

Frontend Technologies: Next.js, React, Tailwind CSS, Electron.

AI & ML: RAG architectures, Vector Databases, Semantic Search, XGBoost, NLP (BioBERT).

AWARDS AND ACHIEVEMENTS

Certificate of Completion: ALX Back-End Web Development Specialization (Comprehensive 4-month program).

Ranked Top 19 out of 90+ competing national teams in ECPC 2025 (Placed in the Top 5 inside ASTU).

Quarterfinalist in the prestigious A2SV National Hackathon 2024, competing against 100+ elite software engineering teams.