

# Abdelali Jabri

Ben Guerir, Morocco

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## Profile

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Software Engineer trained at the 1337 (42 Network) with strong foundations in systems programming, backend development, DevOps, and applied AI systems. Currently building an AI-powered learning platform for UM6P students using Retrieval-Augmented Generation (RAG), FastAPI, and modern web technologies. Strong problem-solver with product mindset and startup exposure.

## Education

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**1337 Coding School (42 Network)** — Ben Guerir, Morocco

Software Engineering Program — Level 11.55 2023 – Present **High School Abi Baker Al Kadiri** — Salé, Morocco

Baccalaureate in Physical Sciences 2022

## Experience & Programs

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**UM6P × MIT Sandbox — Explorer Program** 2025

Selected participant in an entrepreneurship and innovation program focused on MVP development, problem validation, and startup execution. Worked on product ideation, rapid prototyping, and cross-functional collaboration.

## Selected Projects

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**U-Improve — AI-Powered Learning Platform (In Progress)**

*FastAPI, Python, RAG, ChromaDB, Groq API, Node.js, PostgreSQL, Docker*

- Designed a microservice-based AI tutoring platform for UM6P students.
- Built a Retrieval-Augmented Generation (RAG) pipeline: document ingestion, chunking, embeddings, vector storage, and contextual querying.
- Implemented a FastAPI AI service communicating with a Node.js backend via HTTP.
- Enabled personalized AI tutoring based on student profile, study field, and uploaded materials.
- Planned future extensions: voice interaction, quizzes, handwritten notes OCR.

**Komet — AI-Powered Conventional Commit Generator**

*Python, Typer, GitPython, Groq LLM API, Poetry, PyPI packaging*

- Developed a CLI tool that analyzes staged git diffs and generates clean, Conventional Commits messages using Groq's fast LLM inference.
- Integrated GitPython for diff extraction and Typer for modern CLI interface.
- Published to PyPI as ikomet for easy global installation via pipx/pip.
- Handled edge cases: large diff truncation, git repo validation, and secure API key loading via environment variables.
- Open-source on GitHub with detailed README, demo, and installation instructions.

**Webserv — HTTP Server in C++ (C++98)**

*Networking, Unix, OOP*

- Built an HTTP/1.1 server supporting GET/POST/DELETE, routing, CGI, cookies, and sessions.
- Implemented non-blocking I/O, configuration parsing, and process management.

### **Minishell — Unix Shell Implementation**

*C, System Programming*

- Implemented pipelines, redirections, environment handling, parsing, and signal management.

### **Inception — Containerized Infrastructure**

*Docker, Docker Compose, Nginx, Linux*

- Designed a production-like container architecture with isolated services and persistent volumes.

### **ft\_transcendence**

*Full-stack Web Application*

- Multiplayer Pong game with authentication, real-time gameplay, user profiles, and admin features.

## **Technical Skills**

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**Languages:** C, C++, Python, JavaScript, Typescript, Bash

**Backend:** FastAPI, Node.js, Fastify, REST APIs, HTTP

**AI & Data:** RAG, LLM APIs, Embeddings, Vector Databases

**DevOps:** Linux, Docker, Docker Compose, Nginx

**Systems:** Sockets, processes, pipes, signals

**Tools:** Git, Makefile, VS Code, Vim

## **Languages**

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Arabic — Native

English — Strong proficiency

French — medium