

ADIL BELMQADEM

Software Engineer

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SUMMARY

Software Engineer with a strong foundation in data structures, algorithms, and system design, and hands-on experience building backend and full-stack systems. Studying machine learning and AI through RNCP Level 7 at 1337 Coding School (42 Network). Shipped end-to-end products in healthcare, climate tech, and hospitality in small agile teams.

TECHNICAL SKILLS

Languages: TypeScript, JavaScript, Python, C++, C, SQL, Bash

Engineering Fundamentals: Data Structures & Algorithms, Problem Solving, System Design, Microservices, Event-Driven Architecture, REST API Design, Caching, Message Queues

Backend: Node.js, Express, FastAPI, WebSocket, Socket.io, JWT, OAuth 2.0, RabbitMQ, Inngest

Databases: PostgreSQL, MySQL, MongoDB, Redis, Prisma, Supabase

Cloud & DevOps: Docker, Docker Compose, Kubernetes (K3s), Argo CD, Nginx, CI/CD, Azure, Vercel, Git, GitHub

AI/ML: Machine Learning, LLM Applications, RAG, LangChain, LangGraph, AI Vision

Frontend: React, Next.js, React Native, Expo, Tailwind CSS, React Query

Systems: UNIX/Linux, TCP/IP, HTTP/1.1, Sockets, Multi-threading, Memory Management

Collaboration: Teamwork, Agile Workflows, Code Review, Technical Documentation, Stakeholder Communication

Spoken Languages: English (Proficient), French (Proficient), Arabic (Native)

EXPERIENCE

Software Engineer Intern | Hisia Space (UM6P / The Forge), Ben Guerir, Morocco

Sep 2025 – Mar 2026

- Built the company marketing site with React, Three.js, and Framer Motion; deployed to Vercel with CI/CD.
- Rebuilt 4 core platform screens in Next.js and audited the codebase (frontend architecture, API contracts).
- Integrated Inngest for background job orchestration, decoupling 3+ long-running processes from the request lifecycle.
- Ran 10+ stakeholder interviews (researchers, NGOs, government agencies) that redefined the core value proposition.
- Set up a GitHub Projects board and documented decisions so a remote CTO could review work asynchronously.

PROJECTS

RCPIa: AI-Powered Oncology Decision Platform | Freelance

2026

- Built an AI platform for CHU Mohammed VI de Marrakech where 9 specialist agents (LangGraph, LangChain, RAG) draft oncology care plans for physician review in about 75 to 80 seconds; abstract accepted as an oral communication at the 120th Congrès Français d'Urologie.
- Delivered end to end: React Native (Expo) app, Next.js web client, FastAPI backend on Supabase/PostgreSQL, pgvector RAG pipeline (collaborated), AI Vision form auto-fill, and PDF export; deployed on Railway and Vercel.

CoworkOS: Coworking Space Management Platform | Freelance

2025

- Built an event-driven SaaS (subscriptions, bookings, real-time dashboards) sustaining 200+ concurrent sessions at sub-100ms API response times via Redis and RabbitMQ.
- Split the backend into auth, user, and booking services (PostgreSQL, Prisma); 2FA, JWT, RBAC; Docker Compose.

Matcha: Full-Stack Dating Application | 1337 School Project

2026

- Built a real-time dating platform (two-person team): chat, matching, notifications, OAuth, geolocation; Nginx + SSL.
- Owned the backend: REST API, PostgreSQL schema, Redis caching, Socket.io, JWT/OAuth 2.0 authentication.

Systems and Infrastructure Projects | 1337 School

2023 – 2025

- **HTTP/1.1 server in C++** (team of three): standards-compliant server on raw sockets with non-blocking I/O, CGI, file uploads, and chunked transfer encoding.
- **ft_transcendence:** real-time Pong platform on seven microservices with a custom JSX rendering engine and WebSocket matchmaking for 500+ simultaneous players.
- **Inception of Things:** K3s, Vagrant, and Argo CD GitOps. **Minishell:** POSIX shell in C (pipes, heredoc, signals).

EDUCATION

Software Engineering Program, RNCP Level 7 (AI and Algorithms) | 1337 Coding School (42 Network) 2023 – Present

Bachelor's in Economics & Management | Mohammed V University, Rabat, Morocco

2020 – 2023