

Bahaeddine Hemmem CHAREN

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Summary

Software Engineer with over **1 year of experience** in web development, databases, AI/LLM systems, and DevOps, using tools like Python, Node.js, React, PostgreSQL, and Docker. Currently a Python Developer at **Energisme**. Recent experience includes building full-stack AI platforms at **Ctopilot** and leading open-source data tooling at **Awras AI**.

Technical Skills

- **Backend:** Node.js, Nest.js, FastAPI, Microservices, PostgreSQL, Redis, MinIO, Rustfs
- **Caching & Messaging:** Redis, RabbitMQ, Kafka
- **Frontend:** React, Next.js, Tailwind CSS, Zustand, React Query
- **DevOps:** Docker, Traefik, Nginx, GitHub Actions
- **AI/ML:** PyTorch, TensorFlow, OpenCV, LangGraph, Chainlit, Langfuse
- **Languages:** Python, TypeScript, SQL, Go

Professional Experience

Python Developer July 2026 – Present
Energisme Remote

- Migrated production data processing pipelines from a legacy codebase to a modern stack.
- Collaborated with backend teams to write specifications for new pipeline requirements.
- Owned and built a new microservice that runs heavy calculations more efficiently than the system it replaced.
- Deployed and ran services in a Kubernetes environment.

Open Source Project Lead September 2025 – Present
Awras AI

- Led an open-source data pipeline for training multilingual and conversational AI models.
- Built scrapers for Facebook, YouTube, and other sources to collect training data at scale.
- Designed an agentic workflow to generate synthetic conversational data for dataset augmentation.
- Built the in-house annotation platform used to label and review collected and generated data.
- Fine-tuned Gemma 3 4B and built pipelines to clean, normalize, and prepare the text data.

Full Stack Software Engineer August 2025 – June 2026
Ctopilot Hybrid

- Developed a production-grade LangGraph agent with observability through Langfuse.
- Migrated stateless LLM calls to stateful, agentic architectures using LangGraph.
- Built multimodal features, including audio transcription and OCR, for voice and image input.
- Packaged a React/TypeScript frontend into a native Android app using Capacitor.
- Deployed and monitored applications across multiple servers, including reverse proxy and firewall setup with Nginx.
- Integrated Google authentication and built pipelines to track LLM performance.

Backend Developer May 2025 – June 2025
TransformaTek · Internship 1 month

- Implemented backend internationalization (i18n) on Deployli, the company's deployment platform.
- Built an admin interface for adding and removing supported languages.
- Built a Python client library for the TTK ePay payment gateway, with secure request signing and support for initiating, verifying, and checking the status of payments.

Key Projects

Jawab AI
React, FastAPI, Capacitor, Chainlit, LangGraph, PostgreSQL

- Built a stateful, agentic AI backend with LangGraph for an Arabic-French linguistic assistant (translation, grammar analysis, conjugation).

- Added multi-modal input (voice transcription, image OCR) on top of a custom React frontend built with the Chainlit client library.
- Packaged the frontend into a native Android app using Capacitor.
- Dockerized, secured, and deployed the stack behind an Nginx reverse proxy.

Regumint

Next.js, FastAPI, PostgreSQL, pgvector, LangGraph

- Built an agentic RAG system with LangGraph that reasons over multi-part legal questions and refines vector search queries.
- Built a citation validation pipeline that checks every AI-generated claim against source documents to prevent hallucinations.
- Built the Next.js frontend and async FastAPI backend, with PostgreSQL for both relational and vector data.

Awras Annotation Platform

Next.js, FastAPI, Keycloak, Keycloakify, PostgreSQL, Redis

- Built a data annotation platform for managing translation and dictionary tasks across a team of annotators.
- Added a real-time leaderboard to encourage data quality and annotator engagement.
- Set up Keycloak for identity and role-based access, and Redis for rate-limiting and caching.

git-chat



Go, Bubble Tea, Cobra

- Built a terminal chat app that uses a private GitHub repo as its backend, sending and reading messages as commits.
- Built a live terminal UI with Bubble Tea that polls for new messages, and a Cobra CLI for group management.

Education

National Polytechnic School of Oran (ENPO)	2021–2026
<i>Engineering Degree & Master’s Degree in Computer Science</i>	2026

- Specialization: Engineering and Management of Information Systems
- Core Courses: Object-Oriented Programming, Microservices, Database Design, Security, Networking, Web Development

<i>Preparatory Classes in Science and Technology</i>	2021–2023
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- Intensive program in advanced mathematics and physics
- Key Subjects: Algebra, Probability, Thermodynamics

Certifications

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|-----------------------------------|---------------------------------------|
| • Machine Learning Specialization | Stanford University & DeepLearning.AI |
| • Deep Learning Specialization | DeepLearning.AI |
| • Introduction to LangGraph | LangChain Academy |
| • DevOps Pre-requisites | KodeKloud |

Languages

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| • Arabic (Native) | English (Fluent) | French (Advanced) |
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