Med Jalel Masmoudi

AI Software Engineer | Full-Stack Developer
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Education

International Institute of Technology (IIT) **2023 – Present**
B.Sc. in Computer Science, Third-Year Student *Sfax, Tunisia*

Experience

MTD Group Tunisia **Jun 2026 – Aug 2026**
AI Software Engineering Intern *Sfax, Tunisia*

- Built and shipped Jigo AI Workspace, a modular enterprise AI platform used regularly by 250+ users for natural-language data search, document intelligence, and workflow support.
- Built full-stack features with React, TypeScript, FastAPI, and PostgreSQL, including report generation and ERP-oriented workflows.
- Open-source edition: github.com/jalel-masmoudi/Jigo-AI-workspace.

KothonTech GmbH **Jul 2025 – Sep 2025**
Web Development Intern *Remote, Munich, Germany*

- Developed responsive React interfaces, assisted with backend features and database integration, and tested/debugged application issues.

Freelance **2024 – Present**
Web Developer *Sfax, Tunisia*

- Delivered responsive websites and web applications for clients, from requirements gathering and interface development through deployment.

Projects

Jigo RAG Fine-Tuning *2026*
PyTorch, sentence-transformers, PEFT/QLoRA, FastAPI, Docker

- Fine-tuned a bge-small embedder (hard negatives), a reranker and a QLoRA Qwen2.5-1.5B on one 8 GB GPU.
- 350-question synthetic test set: Recall@5 0.76 → 0.93, Recall@1 0.46 → 0.82, answer F1 0.45 → 0.66 (95% CIs).

MuseSwarm | ***JavaScript, Node.js, Baseten, MCP, Docker*** *2026*

- Built a multi-agent software-engineering platform (architect, builder, verifier, and lead) with a Baseten-hosted Muse Spark Open backend, MuseSwarm Studio frontend, and Cursor MCP integration; built for the Meta Global AI Developer Hackathon.

Masmo – Enterprise Investigation Agent | ***LangGraph, FastAPI, React, NetworkX*** *2026*

- Built a multi-agent investigation workflow and organizational knowledge graph to connect projects, incidents, infrastructure, and documentation, producing explainable reports; built at the RAISE Summit Hackathon.

SkillSmith | ***TypeScript, Node.js, MCP, TrueForge*** *2026*

- Built a self-improving agent for the Stranger Builds challenge that rewrites its own skill after each evaluation run; the score rose from 75.96 to 81.83 on a frozen 20-question MCP API task set.

LeadTN | ***React, JavaScript, APIs*** *2024*

- Built a lead-generation tool that searches and filters Google Maps business prospects by category and location.

Technical Skills

Languages: Python, TypeScript, JavaScript, SQL, Java
Frontend: React, TanStack Start, Next.js, Tailwind CSS, HTML/CSS, Vite
Backend & Data: FastAPI, Node.js, REST APIs, PostgreSQL, MongoDB, MySQL, pgvector, JWT
AI: LangGraph, OpenAI API, Gemini API, Agentic AI, RAG, Tool Calling, Knowledge Graphs, MCP, Baseten
Tools: Git, GitHub, Docker, GitHub Actions, Cloudflare Pages
Spoken Languages: Arabic (Native), English (Professional), French (Professional)

Certifications & Activities

AWS Certified Cloud Practitioner; MongoDB Associate Developer; GitHub Foundations; GitHub Actions; Google Cloud Generative AI Fundamentals; MongoDB AI-Powered Search with Vector Search. IEEE Student Member.