

Marwa Iben Khalifa

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PROFESSIONAL SUMMARY

Fullstack engineer with 4+ years across applied AI and backend. I build AI-powered products end to end: LLM agents and intelligent tooling shipped to production, exposed through FastAPI and Node.js REST APIs in both real-time and batch. I own architecture from first version to production - a hybrid business-rules + AI system running 3 million transactions, and a search migration that cut infrastructure cost from over EUR 1,000/month to EUR 10/month. Comfortable with Python, AWS and TypeScript, and I use AI development tools daily to ship faster. MSc in Big Data and Artificial Intelligence.

CORE COMPETENCIES

LLM & AI Agents in Production

Python / FastAPI

AWS (IAM, Lambda, S3, EC2, CloudWatch)

Backend Architecture & Scalability

TypeScript / Node.js / React

Prototype to Production

AI-Assisted Development

Observability & Cost Monitoring

WORK EXPERIENCE

Airporting05/2025 - Present

AI Product Builder

Paris, France

- Design and ship LLM-powered financial agents to production for banking data analysis and user assistance.
- Integrate LLMs (OpenAI API, Anthropic, any provider), tools and connectors; expose them through FastAPI and Node.js REST APIs, real-time and batch.
- Own an AI transaction-categorisation product from first design to production: 3 million transactions processed, ~100 per client per day.
- Continuous model improvement: evaluation, fine-tuning and hardening against real-world data.
- Frame use cases directly with product and finance teams, from need to delivered value.

Airporting10/2022 - 05/2025

Fullstack & Data AI Engineer

Paris, France

- Backend and fullstack development of a SaaS application (TypeScript, Node.js, React/Next.js) deployed on Vercel.
- Rebuilt search architecture: migrated from a proprietary ElasticSearch-class SaaS to self-hosted Typesense - cost cut from over EUR 1,000/month to EUR 10/month, with no data or usage cap.
- Built banking data collection and synchronisation pipelines (scrapers, APIs, banking connectors).
- Set up observability and monitoring (Sentry, Grafana, CloudWatch).
- Deployed a self-hosted n8n instance to automate internal workflows.

Independent2026

Freelance Engineer - Automation & Web

Remote

- Designed and built custom automations and integrations (APIs, n8n, Notion, connectors, scraping) to speed up a client's business processes.
- Scoped the need, delivered end to end and supported the client through to production.

Adroi09/2021 - 08/2022

Data & Automation Developer

Paris, France

- Built KPI dashboards and automated reporting for business steering.

- Extracted, structured and analysed CRM data.

PROJECTS

AI Financial Agents Fintech

LLM-powered agents for financial data analysis and user assistance, with tool and connector orchestration exposed via API.

Python, LLM, OpenAI API, FastAPI

Bank Transaction Categorisation Fintech / ML

End-to-end ML system from raw data to production API. 3 million transactions processed, ~100 per client per day. Hybrid business-rules + AI architecture, deployed on GDPR-compliant European cloud.

Python, FastAPI, scikit-learn, Node.js, Docker

Search Architecture Rebuild Cost Reduction

Migrated a proprietary SaaS to self-hosted Typesense: cost down from over EUR 1,000/month to EUR 10/month, with no data or usage limits and full data ownership.

Typesense, REST APIs, Node.js

Boldee.co Backend B2B PropTech

Backend of a B2B SaaS platform: quote, validation and notification workflows.

Node.js, PostgreSQL, REST APIs

EDUCATION

MSc - Information Systems Expert, Data & AI Development IPSSI

2021 - 2023

Montigny-le-Bretonneux, France

BSc - Fullstack Web Development Ironhack

2020

Paris, France

CERTIFICATIONS

Python & AI Training: Machine Learning, Deep Learning

SKILLS

AI & Agents: LLM, AI agents, RAG, fine-tuning, NLP, classification, Machine Learning, Deep Learning

Backend: Python, FastAPI, Node.js, NestJS, TypeScript, REST APIs, microservices **Frontend:** React, JavaScript, TypeScript

Cloud & DevOps: AWS (IAM, Lambda, S3, EC2, CloudWatch), Docker, GitHub Actions, Vercel

Data & Search: PostgreSQL, MySQL, MongoDB, Typesense, ElasticSearch

Languages: Arabic (native), French (bilingual), English (professional working proficiency)