



EL HADRATI OTHMAN

DATA AND ARTIFICIAL INTELLIGENCE STUDENT

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SUMMARY

I am a third-year Data Engineering student at the National School of Applied Sciences in Al Hoceima (ENSAH). I am passionate about data engineering, artificial intelligence, and computer science , and I'm eager to apply my skills and knowledge to build innovative, data-driven solutions.

EXPERIENCES

AI DEVELOPER — SSIS TO DATABRICKS MIGRATION AGENT — SHIFTBRIKS

2025/07/01 – 2025/09/31

- Developed an AI-driven multi-agent system for automating SSIS-to-Databricks migration, implementing a Multi-Layered Analysis Pipeline to parse SSIS files, extract transformations, dependencies, and data lineages, and validate data type compatibility — reducing manual effort, errors, and overall migration time.
- Built a Migration Agentic System using CrewAI to coordinate multiple agents (Manager, Analyst, Planner, Coder, Validator, RAG), automatically generating production-ready Databricks notebooks, providing clear migration reports, and guiding a step-by-step workflow for full ETL migration.
- Tools & Technologies:** Databricks, SSIS, SQL Server, Memgraph, CrewAI, Docker

TEAM LEAD AI DEVELOPER — SOVEREIGN AI GATEWAY FOR MOROCCO — XAI

2025/08/01 – 2025/09/31

- Led the development of a Moroccan alternative to OpenRouter, building an LLM API gateway with FastAPI for model serving, intelligent routing, and secure authentication/authorization — ensuring data sovereignty, privacy, and support for Arabic/Moroccan use cases.
- Directed full-stack development stack for dashboard/playground/chat, containerized LLMs with Ollama, and integrated both open-source and API-based models, delivering a sovereign SaaS platform that reduces foreign dependency and fosters local AI innovation.
- Tools & Technologies:** Next.js, Supabase, Docker, FastAPI, Grafana, Prometheus, Caddy, Prisma

PROJECTS

AI-POWERED PORTFOLIO CHATBOT

AGENTIC AI

- Developed a chatbot API to enhance portfolio interactions through a hierarchical multi-agent system, including agents for retrieving GitHub repositories, providing project insights, managing user interactions, and sending emails. and memory handling is enabled via Mem0 AI for context-aware conversations.
- Tools:** FastAPI, CrewAI, Mem0 AI, Google Gemini API, AgentOps, Gmail SMTP (including session management, CORS protection, and real-time monitoring).

AI CHATBOT FOR SMART CITY ASSISTANCE – AL HOCEIMA

AGENTIC AI

- Developed an AI-powered chatbot for Al Hoceima that provides real-time information on tourist attractions, coffee shops, weather updates, and duty pharmacy schedules. The chatbot can suggest locations with images or interactive map views, and can also identify a place and provide related information when the user submits an image of it.
- Tools:** FastAPI, LlamalIndex, LangChain, Qdrant, Pandas Query Engine, MySQL, LangTrace, Web Scraping (including map rendering, image analysis, and real-time monitoring).

DARIJA SENTIMENT ANALYSIS PLATFORM

MACHINE LEARNING

- Developed a sentiment analysis platform for Darija (Moroccan Arabic) enabling real-time text and YouTube comment analysis using a machine learning model and fine-tuned Darija-BERT model.
- Tools :** FastAPI, ReactJS, DynamoDB, Amazon S3, Scikit-learn for Machine Learning & Deep Learning (including active learning).

EDUCATION

- National School of Applied Sciences (ENSAH) Al Hoceima**
 - Third-year Student in Data Engineering
- National School of Applied Sciences (ENSAH) Al Hoceima**
 - Preparatory Cycle
- Ibn Tofail University Kenitra**
 - First year of Bachelor's degree

2023 – Now

2021 - 2023

2020 - 2021

ADDITIONAL INFORMATION

- Languages & Frameworks:** Python, Java (Spring Boot), JavaScript (React/NextJS)
- OS & Scripting:** Linux, Windows, Bash
- DevOps/Cloud:** Git, GitHub, Docker, AWS
- Big Data:** Spark, Hadoop, Hive, Kafka, Sqoop
- Certifications:** 10+ in Data & CS (Oracle, Coursera, etc.)
- Databases:** RDBMS, PL/SQL, MongoDB
- AI/ML:** ML, DL, NLP, Generative AI, Agentic AI
- Big Data:** Spark, Hadoop, Hive, Sqoop
- Design/Modeling:** Agile/Scrum, UML
- Soft Skills:** Problem Solving, Teamwork, Adaptability
- Languages:** English(Proficient) , French(Proficient)