

Oussama Mahdjour

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Portfolio | LinkedIn | GitHub

Technical Skills

Languages: Python, Java, TypeScript, SQL, JavaScript **Tools:** Docker, AWS, Git, Jira, Kubernetes, GitHub, Figma
AI: TensorFlow, PyTorch, SciKit-Learn, Transformers, Langchain **Development:** React, FastAPI, Next.js, Scrapy
Data Engineering: MySQL, MongoDB, PostgreSQL, Redis, Firebase, Neo4j, Kafka, ElasticSearch, Spark

Experience

- AI Research Intern, EDF R&D Lab Saclay** 03/2025 – 09/2025
- Explored neuro-symbolic approaches to guide knowledge graph generation from documents using LLMs.
 - Integrated a pipeline combining LLM-based generation, logical validation (DCG, PySwip), and benchmarking on sources like Wikidata.
- Software & AI Engineer, OwlStack** 02/2024 – 10/2024
- Developed scalable web applications using React.ts and Next.js.
 - Built and deployed custom web scrapers for commercial data collection.
 - Designed an AI chatbot using FastAPI, OpenAI, AWS Bedrock, and LLMs.
- Software Engineer, 3M Zone** 10/2023 – 03/2024
- Built an interactive web application using ReactJS and TypeScript.
- Data Scientist Intern, Ericsson** 03/2023 – 04/2023
- Developed a deep learning-based intrusion detection system using AutoEncoder architectures.
 - Enhanced DDoS classification with ensemble learning (6 machine learning models).
- IT Engineering Intern, Numilog** 06/2022 – 07/2022
- Developed an employee scheduling system using React/Node.js.
- Software Development Intern, YouInnovate** 06/2021 – 10/2021
- Designed a retail management app in Java and implemented sales analysis for inventory optimization.

Education

- Master's in Computer Science, Université Paris-Saclay** 2024–2025
DataScale: Large-Scale Data and Knowledge Extraction
- Master's in Information Systems, ENP Oran** 2021–2023
Thesis: Audio Summarization System with Transformers [GitHub]
- Engineering Degree, ENP Oran** 2020–2023
Thesis: DDoS Intrusion Detection using ML/DL [GitHub]
- Preparatory Classes, ENSTI-Annaba** 2018–2020

Projects

- AI Chatbot with LLMs & Kubernetes** [GitHub]
- Modular chatbot using RAG, FastAPI, PostgreSQL, Redis, Streamlit, Docker, and Kubernetes.
- Reddit Crypto Sentiment Analysis** [GitHub]
- End-to-end pipeline: Reddit API → cleaning → NLP classification.

Languages, Certifications & Other

Languages: Arabic (Native), English (C1), French (B2)
Certifications: Deep Learning Specialization - Coursera Machine Learning Specialization - Coursera