



EXPERIENCE

ALPHA10X | Software Engineer

March 2023 – Present | Aix-en-Provence, France

• Key Responsibilities:

- Design and implement scalable architectures and end-to-end software pipelines using Azure, Databricks, Docker, Elasticsearch, SQL and NoSQL databases. Also, build and maintain CI/CD pipelines of microservices.
- Develop production-ready APIs and web services with FastAPI, implementing caching strategies and message queuing systems for high-throughput applications.
- Develop and deploy custom AI software solutions (APIs, LLM services, dashboards) tailored to our client needs.

• Key Achievements and Client Projects:

- **Permira** (\$87B AUM): Built an enterprise-grade RAG-based API in 2 weeks featuring multi-agent architecture, PDF extraction, and SQL query generation capabilities.
- **ALPHA Attributes API**: Architected serverless API with Redis caching and Azure Service Bus for queue management, processing thousands of companies with multi-source data retrieval. Implemented web scraping mechanisms and optimized performance from 38s to 14s per company.
- **Syensqo**: Engineered automated data pipeline processing 1000+ company attributes and querying transactions from a 2M-document Elasticsearch index, significantly reducing analysis time.

ÁGUAS DE PORTUGAL | Data Engineering Intern

June 2023 – August 2023 | Lisbon, Portugal

- Built Django backend for web application connected to Power BI to manage company requests and data processing workflows.
- Developed data cleaning and processing pipelines to build robust database infrastructure.
- Created interactive Power BI reports for executive dashboards and project management.

PROJECTS AND ACCOMPLISHMENTS

AGENT HUB: OPEN-SOURCE PLATFORM FOR SPECIALIZED AI AGENTS | 1st Place , Morocco AI Challenge 2024

- Developed an open-source platform that enables modular, specialized AI agents to perform computer automation tasks.
- Designed the to decouple agents based on tasks, leveraging lightweight LLMs and traditional software to optimize for speed, memory usage, and task accuracy.
- Built an using langgraph, creating a graph-based execution pipeline to plan, coordinate, and adapt task flows dynamically based on user input.
- Implemented an to benchmark agents against performance metrics such as latency, memory usage, accuracy, and cost, integrating CI/CD for automated testing and deployment.
- Built a to score agents based on multi-factor evaluations, ensuring fair and transparent agent rankings.

MARS ROVER PROTOTYPE: IOT ROBOTIC SYSTEM | Full-Stack Web Development & IoT Integration

- Built web application using Django backend and JavaScript (React) frontend for real-time control and monitoring.
- Developed live streaming interface with integrated computer vision for face detection and remote robot operation.
- Implemented real-time sensor data visualization with dynamic charts for temperature, humidity, and motion sensors.
- Designed responsive web interface deployable on Raspberry Pi with radio communication modules for wireless rover control.

EDUCATION

MASTER AND BACHELOR DEGREE IN INDUSTRIAL ENGINEERING | Minor : Data Science

EMINES - Mohammed VI Polytechnic University

Sep 2019 - 2024 | Ben Guerir, Morocco

Relevant Coursework: Optimization, Linear Algebra, Probabilities, Statistics, Calculus, ML & DL, Databases, Mining, Finance.

SKILLS

Technical Skills: Cloud Architecture (Azure, Databricks) • API Development • DevOps & CI/CD • Python • SQL & NoSQL DBs

Soft Skills: Adaptability • Teamwork • Problem Solving • Strategic Planning • Communication

Languages: English (Proficient) • French (Proficient) • Arabic (Fluent) • Chinese (HSK1)