AYMEN JEDDOU

Software & Data Engineering Student

Seeking an end-of-studies (PFE) internship in Data Science / Artificial Intelligence

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PROFILE

Third-year engineering student (Software Engineering & Data Engineering track) with hands-on experience designing and industrializing RAG (retrieval-augmented generation) systems in a production environment, as well as coordinating a technical team as Scrum Master. Raised an AI assistant's retrieval quality from hit@5 = 0.50 to 0.90 through a rigorous measure-and-iterate approach.

PROFESSIONAL EXPERIENCE

Intern - RAG Engineer & Scrum Master | IDEALAB, Bizerte *June – August 2026*

Digital Campus / FSB Nexus project: a RAG-based intelligent academic assistant for the Faculty of Sciences of Bizerte

- Designed and built a multi-agent RAG pipeline (4 specialized agents: orientation, academic, administrative, learning) that routes each question to the relevant agent and generates sourced answers with automatic citations.
- Diagnosed a vector index misconfiguration and implemented hybrid search (vector and full-text, reciprocal rank fusion): hit@5 raised from 0.50 to 0.90 and MRR from 0.395 to 0.776 on an internal benchmark.
- Built an evaluation harness (annotated question set and a 100-question set) measuring hit@5, MRR, recall@10, answer rate and wrong-answer rate, adopted by the whole team as the quality baseline.
- As Scrum Master, managed the backlog of a 4-person team and merged all branches into the shared development branch, resolving integration conflicts, including a security flaw detected in the streaming flow.
- Contributed to the production release: CI/CD pipeline (GitHub Actions, 69 automated tests), Docker containerization and versioned database migrations (Alembic).

Repository: github.com/AymenJeddou/digital_campus_platform

Intern - Automation & Data Processing | OAK Visuals *July – August 2025*

Tools: Microsoft Dynamics 365 Customer Insights - Journeys, Power Automate, Microsoft Fabric

- Automated multichannel customer journeys (email, SMS, push notifications) and connected their data flows to an analytics tool for centralized reporting.
- Structured and analyzed operational data by theme (AI, cybersecurity, DevOps) using a low-code automation tool, producing summaries used by business teams.

EDUCATION

Engineering Degree in Software Engineering & Data Engineering (3rd year) | FSB *2024 – 2027*

Integrated Preparatory Cycle - Mathematics, Physics, Computer Science | FSB *2022 – 2024*

Baccalaureate, with Honors (Mention Bien) *2022*

TECHNICAL SKILLS

Languages: Python, JavaScript, SQL, Java

AI & Machine Learning: RAG, LLM (Mistral), sentence-transformers, LangChain, Scikit-learn, TensorFlow, Pandas, NumPy, OpenCV, YOLOv8

Data & Databases: PostgreSQL (pgvector), hybrid vector / full-text search, MongoDB, Supabase

Backend & Web: FastAPI, Node.js, Express.js, React, JWT

DevOps & Tools: Git, Docker, GitHub Actions (CI/CD), Alembic, Linux, Postman

Automation: n8n, Zapier, Power Automate, Microsoft Dynamics 365

ACADEMIC PROJECTS

Smart Olive Grove - IoT Monitoring & Prediction | github.com/AymenJeddou/OliveGrove_IOT

- Real-time environmental monitoring dashboard fed by Arduino sensors, coupled with a Machine Learning model to analyze soil health.

Road Degradation Detection - Computer Vision | github.com/AbderrahimNeji/FinalProjectDevops

- Real-time road anomaly detection system based on YOLOv8, with geospatial visualization of predictions.

JobJet (full-stack platform with OAuth, job offers and messaging) and **Insurance Prediction System** (predictive model for insurance premium analysis): github.com/AymenJeddou/JobJet, github.com/AymenJeddou/insurance-claim-prediction.

CERTIFICATIONS & LANGUAGES

Certifications: AI Fundamentals (DataCamp), Data Analyst Associate (DataCamp)

Languages: French (Bilingual), English (C1), Arabic (Native)