

# Adam Derbel

## AI & DATA SCIENCE ENGINEER

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🌐 github.com/Adamderbel 🌐 adamderbel.github.io/Adam-Portfolio 🎨 huggingface.co/AdamDE

### SUMMARY

AI & Data Science Engineer pursuing a Master's in Software Engineering with strong expertise in machine learning, deep learning, and LLM engineering. Experienced in building scalable AI systems, deploying end-to-end solutions, and applying data driven insights to solve complex problems. Passionate about bridging research and real-world applications to deliver measurable impact.

### SKILLS

#### Programming & Databases

Python, SQL, NoSQL, APIs, ETL

#### Machine Learning & Analytics

Scikit-learn, Statsmodels, Pandas, NumPy

#### Deep Learning

PyTorch, TensorFlow, Keras, NLP

#### LLM Engineering

Hugging Face, LangChain, FAISS, RAG, Ollama LLM, LoRA/PEFT

#### Visualization & Applications

Plotly, Matplotlib, Dash, Streamlit, Flask

#### Deployment & MLOps

Docker, Git, GitHub, Hugging Face Hub

#### Data Acquisition

BeautifulSoup, Requests

#### Soft Skills

Problem-Solving, Collaboration, Communication, Analytical Thinking

### PROJECTS

#### AI Market Pulse Dashboard | Github

Modular AI powered platform for market analysis across finance, IoT, and marketing.

- Engineered a modular architecture supporting multiple domains, enabling rapid expansion for new use cases.
- Orchestrated ETL pipelines with SQLite and daily data refreshes, streamlining data processing.
- Integrated forecasting models and local LLMs to generate actionable insights.
- Developed interactive dashboards with stock analysis, indicators, and CSV export enhancing decision making.

**Tech Stack:** Python, SQL, Dash, Ollama LLM, Scikit-learn, Pandas, Plotly

#### Context Aware Website Chatbot (RAG) | Github

Domain specific chatbot using Retrieval Augmented Generation.

- Implemented AI chatbot using Mistral LLM + FAISS for fast, context aware responses.
- Automated web scraping and secure text preprocessing.
- Constructed RAG pipeline with vector search + generative AI for accurate Q&A.
- Designed Streamlit UI with session-based chat history.

**Tech Stack:** Python, Ollama LLM, Hugging Face, LangChain, FAISS, Streamlit

#### FineTuned TinyLlama for Custom YouTube Replies | Github

Lightweight LoRA finetuned LLM for domain specific comments.

- Collected and prepared dataset of AI/ML YouTube comments.
- Trained and evaluated TinyLlama-1.1B-Chat with LoRA/PEFT.
- Published model adapter on Hugging Face Hub.

**Tech Stack:** Python, Transformers, Hugging Face, LoRA/PEFT

### PROFESSIONAL EXPERIENCE

#### Clinisys | Business Intelligence Intern

Sfax, Tunisia | Feb 2024 – June 2024

- Analyzed customer and sales datasets to support segmentation and forecasting.
- Designed interactive dashboards, improving stakeholder access to KPIs.
- Streamlined BI reporting, enhancing team workflow and decision making.

#### Karry Group | Web Development Intern

Sfax, Tunisia | June 2023 – Aug 2023

- Developed a web-based application with integrated database.
- Improved workflows with structured data management and automation.
- Delivered a production ready system applying full stack best practices.

### EDUCATION

#### Master of Science in Software Engineering (Online)

Higher Institute of Technological Studies · sfax, Tunisia | Sep 2024 – Present

#### Bachelor of Science in Computer Science (Big Data)

Higher Institute of Computer Science and Multimedia · sfax, Tunisia | Sep 2021 – June 2024

### CERTIFICATES

- Certificate of Completion – Generative AI Hackathon with IBM Granite (Lablab)
- Applied Data Science Lab – WorldQuant University (Credly)