Adam Derbel
Full-stack AI Engineer

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🐙 github.com/Adamderbel 🔗 adamderbel.github.io/Adam-Portfolio · https://www.kaggle.com/adamder7

SUMMARY

Full-stack AI Engineer specializing in ML, LLM systems, and blockchain-based applications. Experienced in building end-to-end AI platforms, RAG chatbots, Chrome extensions, and privacy-first dApps. Focused on turning complex technical concepts into practical, secure, and impactful solutions. Looking for the next challenge in a journey of innovation, growth, and real-world impact.

SKILLS

Programming & Databases
Python · SQL · NoSQL · REST APIs · ETL Pipelines

Machine Learning & Data Science
Scikit-learn · Statsmodels · Pandas · NumPy · Feature Engineering

Deep Learning & NLP
PyTorch · TensorFlow · Hugging Face Transformers · NLP Pipelines

LLM & RAG Engineering
LangChain · FAISS · RAG Pipelines · Ollama LLM · LoRA/PEFT · Vector Databases

Web Development & Apps
React · TypeScript · FastAPI · Flask · Dash · Streamlit Laravel · ASP.NET Core

DevOps & Deployment
Docker · Git/GitHub · CI/CD · Hugging Face Hub

Methodologies
Agile · Scrum · Kanban

Data Acquisition & Scraping
BeautifulSoup · Requests · Web Scraping

PROJECTS

AI Web Guardian | GitHub · Devpost
Google Chrome Built-in AI Challenge 2025
Chrome MV3 security extension using on-device AI for real-time website risk analysis.
- Built security checks for SSL, domain impersonation, cookie banners, trackers, and redirect chains.
- Integrated Chrome's on-device Summarizer + LanguageDetector to generate local AI insights with zero data transmission.
- Designed clean popup and side-panel UIs ensuring a smooth user experience.

Tech Stack: React (Vite + TypeScript), Chrome MV3 APIs, On-device AI APIs, Node.js, RDAP, crt.sh

MedVault | GitHub · Devpost
Midnight Hackathon 2025
Privacy-preserving dApp for encrypted medical record ownership and selective sharing
- Integrated mocked Midnight SDK for encrypted data & permissions.
- Implemented smart-contract logic via Lace Wallet: doctors request specific fields, and patients approve access.
- Developed patient & doctor dashboards for uploads, access requests, notifications, and connections.

Tech Stack: React + TSX, Express.js, Node.js, Blockchain, E2E Encryptionn

Fake or Real: The Impostor Hunt | Kaggle Competition
European Space Agency
NLP pipeline to classify real vs fake text pairs using transformer models.
- Engineered a complete text-pair processing pipeline with augmentation and preprocessing.
- Fine-tuned DeBERTa-v3-large with custom metrics and early stopping.
- Applied margin-based rules for final predictions; achieved 0.8225 accuracy.

Tech Stack: Python, HuggingFace Transformers, PyTorch, Pandas, scikit-learn

AI Market Pulse Dashboard | GitHub
Personal Project
Modular AI-powered market analysis platform with automation and forecasting.
- Built full-stack automated pipelines for data ingestion, cleaning, and visualization.
- Integrated multiple forecasting models achieving ~0.94 average accuracy.
- Added OpenRouter AI (mistral-7b-instruct) for insights, commentary, and analysis.
- Integrated a personal RAG chatbot for instant AI-generated explanations.

Tech Stack: Python, Dash, Pandas, Plotly, SQLite, scikit-learn, OpenRouter AIs

AI-Powered RAG Chatbot | GitHub
Personal Project
RAG chatbot combining web scraping and vector search for source-backed answers.
- FastAPI backend with Ollama LLM + FAISS vector search for intelligent retrieval.
- Dual knowledge sources: scraped web content + JSON knowledge, with semantic search and source attribution.
- Session-based conversation management, persistent chat history, and context-aware prompting.

Tech Stack: Python, FastAPI, Ollama LLM, FAISS, LangChain

PROFESSIONAL EXPERIENCE

Clinisys | Business Intelligence Intern
Sfax, Tunisia | Feb 2024 – June 2024
- Analyzed customer and sales datasets to support segmentation and forecasting.
- Built interactive BI dashboards improving KPI visibility for non-technical teams.
- Streamlined reporting workflows, enabling faster data-driven decisions.

Karry Group | Web Development Intern
Sfax, Tunisia | June 2023 – Aug 2023
- Developed a full-stack web application with integrated database workflows.
- Improved operational efficiency through automation and structured data handling.
- Delivered a production-ready system applying clean architecture and best practices.

EDUCATION

Master in Computer Systems and Networks Development
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