Aymen Fkir

aymenfkir23@gmail.com | +216 29-581-238 | linkedin.com/in/aymen-fkir | github.com/aymen-fkir
portfolio-coral-ten-79.vercel.app

Education

Higher Institute of computer science and Multimedia Gabes , Bachelor in Computer Science — August 2022 - June 2025

Experience

Data Scientist , Deepvolt – Tunis — February 2025 - June 2025

- Engineered a scalable **ETL** pipeline with **Polars** and **EC2**, processing **20+ GB** of Floating Car Data cutting costs by **£40K**.
- Designed a traffic up-scaling model using **stacking ensemble**, achieving $\mathbf{R^2 = 0.9}$ and $\mathbf{MAPE = 0.35}$. Led dataset design and feature engineering.
- Boosted DeepVolt DLIA model $\mathbf{R^2 = 0.75}$ resulting in more than **25%** increase through advanced traffic-based features. Used **python**,**scikit-learn** and **pandas** .

Data Scientist , Deepvolt – Tunis — June 2024 - September 2024

- Implemented a comprehensive geographic analysis pipeline using **Python** and **GeoPandas** to identify optimal locations for electric vehicle charging stations, covering the entirety of **Istanbul** and enabling data-driven infrastructure planning.
- Orchestrated serverless functions using **AWS Lambda** and **API Gateway** to serve responses from the recommendation system, achieving scalable delivery with an average response time of **2.4 seconds**, supporting real-time decision-making for end users.

Projects

AI-Powered E-commerce Analytics Dashboard *Github*

- **Engineered** an ETL pipeline to enrich mock e-commerce data by leveraging large language models (LLMs) for generating product reviews and categorizing items, resulting in a **92% reduction** in processing time and achieving a processing rate of **0.2 seconds per item** on consumer-grade hardware.
- **Optimized** LLM inference performance by **migrating from Ollama to Llama.cpp** and implementing a multi-stage Docker build, which **reduced image size by 80%** and **improved pipeline speed by 25%**.
- **Developed** a high-performance, concurrent client in **Go** using goroutines to handle parallel requests, **improving client-side throughput** and contributing to a **33% increase** in overall pipeline speed.
- **Designed and containerized** a multi-service application with Docker and Docker Compose to **ensure a portable and reproducible deployment environment**, incorporating health checks and service dependencies to guarantee a reliable system startup.

Smart Building Monitoring Project *Github*

- Composed a sensor-based backend using **ESP32**, **FastAPI**, and **Docker** for real-time building monitoring with less than **1s** response. hosted on **Back4App**.
- Developed a **TensorFlow** model achieving **80%+** accuracy; containerized with **Docker**, deployed to **Hugging Face**, and served via a custom **FastAPI** endpoint.
- Created an **ETL** pipeline using **Python**, **FastAPI**, and **Supabase** to convert sensor data into **BCF** files for a digital twin platform; won **3rd place** at **IEEE IASTAM**.

Skills

Programming : Python ,Sql ,Go
Cloud & MLOps: AWS ,EC2 ,SageMaker ,Docker ,Git ,Anaconda, Linux, Docker Composer, FastApi
Tools: PostgreSQL , MongoDB, Databricks, Pandas, Sklearn, Seaborn, TensorFlow, Keras, NumPy, Polars, Spark, Hadoop, Tableau
Languages : English ,French,Arabic

Certifications

Databricks fundamentals:**DATABRICKS ACADEMY** — September 2025
Databricks Aws Platform Architect:**DATABRICKS ACADEMY** — September 2025
Generative Ai with Diffusion model : **NVIDIA** — November 2024

Leadership & Publications

Chair IAS ENIG SB 2022-2024

- Led 5+ technical workshops on **AI**, **IoT**, and **digital twins**, engaging over than 30 students.
- Won **6 out of 10** hackathons, including (iot spark,Dataquest and Eco gardien)
- Secured sponsorship to attend the **IEEE IAS Annual Meeting** in **Nashville, USA**, representing ENIG on the international stage.

Blogger On Medium

- Authored a blog on building an AI-Powered E-commerce Analytics platform, covering end-to-end data engineering, LLM-powered sentiment analysis, and automated business KPIs.