

Aymen Fkir

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[portfolio-coral-ten-79.vercel.app](#)

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**.
- Led dataset design for a robust traffic density predictive model achieving **90% of variance (R2)** with a **low error rate 35%** in traffic prediction using **polars ,python** and **sklearn** .
- Boosted deepVolt dlia model by more than **25% accuracy** through advanced traffic-based features using **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 5,343.22 km²** and enabling data-driven infrastructure planning.
- Developed and deployed a real-time recommendation system **serving more than 5 clients** with an average **response time of 2.4 seconds**, utilizing **aws lambda** and **api gateway** with **Python**.

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 (Award-Winning)

[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 .

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

Education

Higher Institute of computer science and Multimedia Gabes , Bachelor in Computer Science

August 2022 - June 2025

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 and published multiple technical blogs on Medium to dissect complex project builds and share my approach.