Medjahri Mohammed Safouane

Final-year AI & Data Science engineering student

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LinkedIn | GitHub | Kaggle | Portfolio

Summary

Final-year AI & Data Science engineering student at ESI-SBA, looking for a PFE or research internship. I build applied machine-learning systems end to end, mostly in computer vision, NLP and deep learning.

Education

École Supérieure en Informatique 08 Mai 1945 (ESI-SBA) — *Sidi Bel Abbès, Algeria*

- **Engineering cycle, Artificial Intelligence & Data Science** — *2024 to 2027 (expected)*
- **Preparatory cycle, mathematics and computer science** — *2022 to 2024*

Baccalaureate in Mathematics — *Highest honours (16.39 / 20) – 2022*

Professional Experience

Network & Security Engineering Intern — *September 2025*
Space Techniques Center (CTS), Arzew

- **Deployed** VLANs, trunks and SSH on Cisco routers to secure internal communications, and **integrated** a FortiGate 400E firewall to filter traffic.

English Instructor — *August to November 2024*
Zenith Academy

- **Taught** English to groups of students while completing the engineering cycle.

Projects

Pocket OMR [GitHub]
Grades a multiple-choice exam from a phone photo: sheet detection, bubble reading and handwritten fields.

- **Led** box detection, **built** the rectification and segmentation stages, and **trained** the bubble classifier, on a team of six.

Spell Caster [GitHub]
A voice-controlled spellcasting game that reads both the spell and the emotion behind it.

- **Built** the speech and emotion pipeline and its local server, on a two-person team; the Unity game was my teammate's.

H-GATE [GitHub]
Sorts malicious URLs into five attack classes with a stacking ensemble.

- **Built** the four base models, the out-of-fold stacking pipeline, the Harris Hawks search and the five-fold evaluation.

AdaIN style transfer [GitHub]
Applies the style of any painting to a photo in one pass, with adaptive instance normalization.

- **Implemented** the model from scratch and **owned** the multi-GPU training and benchmark, on a team of four.

Eigenfaces and Fisherfaces [GitHub]
Face recognition on Olivetti Faces: tells 40 people apart with classical linear methods.

- **Owned** the PCA sweep, the classifier comparison and five-fold CV, on a team of four; Fisherfaces was a teammate's.

Shuttle anomaly detection [GitHub]
Flags abnormal spacecraft telemetry and retrains itself when the model drifts.

- **Built** the detectors, the experiment tracking and model registry, the drift-triggered retraining and the dashboard.

Certifications

Kaggle, nine verified certificates.
Programming: Intro to Programming, Python. **Data:** Pandas, Data Cleaning, Data Visualization.
Machine learning: Intro to Machine Learning, Intermediate Machine Learning, Feature Engineering.
Deep learning: Intro to Deep Learning.

Skills

- **Artificial intelligence:** machine learning, deep learning, NLP, computer vision.
- **Data & cybersecurity:** data analysis, feature engineering, intrusion detection.
- **Systems & HPC:** Linux, parallel computing, networking.
- **Software engineering:** Python, C/C++, Java, web development, APIs, Docker, Git.
- **Tools:** PyTorch, scikit-learn, OpenCV, NumPy, pandas, matplotlib, Jupyter, FastAPI, W&B, Streamlit, Hugging Face.

Languages & Leadership

- **Languages:** English (fluent), French (B2), Arabic (native).
- **Leadership:** HR manager, Ingeniums Club; finance manager, GDG SBA – 2024/25.