

AISSAOUI Ismail

AI & Data Science Engineer

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PROFESSIONAL SUMMARY

AI & Data Science Engineer specialized in Transformers, NLP, recommender systems, optimization, computer vision, and MLOps. Designs and deploys end-to-end AI solutions for HR tech, mobility, retail, and education. Skilled in building ML pipelines, optimizing heavy models, and aligning technical output with business objectives.

SKILLS

Programming: Python, TypeScript, JavaScript, Java, SQL

ML / DL: PyTorch, TensorFlow, Keras, Scikit-learn, Lightning, ONNX

AI Techniques: Transformers (BERT, GPT, RAG), GNN, GAN, XGBoost, LSTM

Optimization: PSO, Genetic Algorithm, ACO, Simulated Annealing, Bayesian Optimization

Web & API: React, Next.js, FastAPI, Node.js, TailwindCSS

Data & MLOps: MLflow, Airflow, Kubeflow, DVC, Pandas, NumPy

Databases: PostgreSQL, MongoDB, MySQL, Neo4j, Cassandra

Cloud & DevOps: Docker, Linux, Git, CI/CD, CUDA, AWS, Grafana

Soft Skills: Technical leadership, Communication, Stakeholder management

PROFESSIONAL EXPERIENCE

Network Engineering Intern

Sep 2024

Algérie Télécom RMC Center — Chlef, Algeria

EDUCATION

National Higher School of Computer Science (ESI-SBA)

2021–2026

Engineering and Master's Degree in Computer Science

Specialization: Artificial Intelligence & Informatics

KEY ACHIEVEMENTS

- Developed custom Transformers (BERT, GPT, RAG) for real-world multilingual applications.
- Built explainable AI platforms for HR tech and public institutions, reducing bias and improving decision accuracy.
- Designed graph-based recommendation systems, achieving +24% accuracy on a 60K-profile dataset.

- End-to-end ML pipelines: ingestion, validation, training, CI/CD, observability.
- Real-time vision systems (YOLO, ByteTrack) reducing inference latency by 32%.

PROJECTS

GNN-based Recruitment Platform (Career Connect)	2024–2025
CV/job matching system using graph embeddings and relational learning.	
<i>Tech: PyTorch Geometric, SBERT, FastAPI, PostgreSQL — Concepts: GNN, Similarity, Embeddings</i>	
Advanced Multi-Optimization NLP Pipeline	2025
Multilingual moderation with PSO, Genetic Algorithm, and Bayesian Optimization.	
<i>Tech: DistilBERT, PyTorch, FastAPI — Concepts: Optimization, Transformers, Classification</i>	
Intelligent University Scheduler	2025
Conflict-free academic schedule generator using hybrid heuristics and evolutionary algorithms.	
<i>Tech: FastAPI, NumPy, Pandas — Concepts: GA, PSO, ACO, Simulated Annealing</i>	
Mini-GPT (Decoder-only)	2025
Implementation of a small GPT model with controlled training and sequential generation.	
<i>Tech: PyTorch, CUDA, AdamW, W&B — Concepts: Transformers, Language Modeling</i>	
North African Sentiment BERT	2025
LoRA adaptation of BERT for Maghrebi dialect sentiment analysis.	
<i>Tech: PyTorch, LoRA, MLflow — Concepts: Fine-tuning, Low-Rank Adaptation</i>	
Geo-RAG — Map Assistant	2025
RAG system integrating geospatial data for map-related queries.	
<i>Tech: ChromaDB, GeoPandas, Streamlit — Concepts: RAG, Spatial Reasoning</i>	
Recognizini — Facial Recognition	2025
Incremental embeddings + active feedback facial recognition system.	
<i>Tech: OpenCV, PyTorch, Redis, FastAPI — Concepts: Embeddings, Drift Management</i>	
PPE Detection Streaming (YOLOv8)	2025
Real-time detection of PPE (helmets, vests) for compliance tracking.	
<i>Tech: YOLOv8, OpenCV — Concepts: Object Detection, Real-Time Processing</i>	
Traffic Analytics Suite	2025
Traffic analysis including tracking, speed estimation, and license plate OCR.	
<i>Tech: YOLOv8, ByteTrack, EasyOCR — Concepts: Tracking, OCR, Analytics</i>	
Hadj Management System	2024
End-to-end logistics management platform for groups and itineraries.	
<i>Tech: React, FastAPI, PostgreSQL — Concepts: Workflow, Synchronization</i>	
Hybrid POS & E-commerce	2025
Offline-first POS system integrated with an online store.	
<i>Tech: PyQt, SQLite, PostgreSQL — Concepts: Sync offline/online, Inventory Management</i>	

LANGUAGES

Arabic: Native | French: Fluent | English: Fluent