



Abdelilah Nossair

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Profile

MSc **Data Science & AI for Business** candidate at **École Polytechnique & HEC Paris** (BSc Computer Science, AI specialization, **Summa Cum Laude, 3.93/4.0**). Hands-on experience training and deploying ML models in **NLP with Transformers, computer vision, and edge AI**, backed by production data experience in industry. **Seeking a 4 to 6 month AI/ML internship starting April 2027** · Convention de stage provided by École Polytechnique.

Education

École Polytechnique (l'X) & HEC Paris, France *Sept 2026 – Expected 2028*
MSc in Data Science and AI for Business

- Joint degree ranked **#2 worldwide** and **#1 in Europe** (QS Business Master's Rankings 2026); curriculum in machine learning, deep learning, statistics, optimization, and AI strategy.

Al Akhawayn University in Ifrane, Morocco *Sept 2021 – May 2025*
BSc in Computer Science (AI specialization) · Minor: Business Administration

- CGPA **3.93/4.0**; **Summa Cum Laude**; President's List (2022, 2024); Dean's List (6 terms).
- **Coursework:** Artificial Intelligence, Natural Language Processing, Machine Learning, Linear Algebra, Statistical Analysis.
- **GRE:** Quant **170/170**, Verbal **169/170**, AW **5.0**.

Baylor University, Waco, Texas (USA) *Aug 2023 – Dec 2023*
Exchange Program in Computer Science

- GPA **3.80/4.0**; Dean's List.
- **Coursework:** Analysis of Algorithms, Probability & Statistics, Languages & Compilers.

El Araki International School, Marrakech, Morocco *Sep 2019 - Jun 2021*
Baccalaureate in Mathematical Sciences, French Option, Série B

- Graduated with **Mention Très Bien**, the highest academic distinction.

Experience

Data Analyst (Full-Time) *Casablanca, Morocco*
Optorg Group - Tractafric Equipment *Oct 2025 – Aug 2026*

- Designed a **multi-source data architecture** unifying ERP, CRM, after-sales, telematics, finance, and maintenance data across **5+ operational areas**, establishing a reliable analytical layer for KPI tracking.
- Developed **Power BI dashboards with advanced DAX** for margins, costs, revenue, and sales-funnel analysis, cutting recurring reporting preparation time by up to **60%**.

AI Engineer & Junior Consultant (Internship) *Casablanca, Morocco*
Deloitte Morocco Cybersecurity Center *Jun 2024 – Aug 2024*

- Built an end-to-end **phishing email detection system** deployed as a **Chrome extension for Outlook and Gmail**, backed by a Flask REST API serving real-time model inference with a privacy-by-design pipeline. ([Repo](#) [🔗](#))
- Curated and preprocessed **nine public email datasets** (Enron, SpamAssassin, CEAS, Nazario, Nigerian Fraud), handling class imbalance via under-sampling, and engineered discriminative features (URL count, special-character ratio, urgency keywords).
- Benchmarked **Random Forest, Gradient Boosting, and Logistic Regression** against a **fine-tuned DistilBERT** combining text embeddings with engineered features; the hybrid DistilBERT reached **98.1% F1** vs. **83.7%** for the best tuned ensemble, and was selected for deployment.

- Developed an internal **HR management platform** (role-based access, workflow automation, structured employee data), digitizing **6 form types** used by **120 employees** and replacing manual paper-based processes.

Projects & Research

AI Assistive Device for the Visually Impaired (Raspberry Pi 5)

[Demo](#) 

- Built a voice-controlled wearable combining **face recognition** (**InsightFace**: RetinaFace + ArcFace embeddings, cosine-similarity matching), **PaddleOCR document reading** with GPT-3.5 summarization, **CLIP-embedding belonging localization**, and **SmolVLM2 scene description**, with **Vosk STT** and **Piper TTS** for hands-free interaction.
- Architected a **distributed edge-server pipeline**: real-time on-device inference on Raspberry Pi 5 with heavier VLM/CNN workloads offloaded to a Flask server, plus a multithreaded wake-word interrupt system; **validated in trials with visually impaired users** through iterative user-centered design.

ML + IoT Irrigation Optimization for Moroccan Agriculture

[Paper](#) 

- Co-authored a peer-reviewed article (*Int. J. of Computing and Digital Systems*): trained **30 zone-specific Random Forest regressors** on **40+ years of NASA POWER daily meteorological data (1981–2024)** to predict FAO Penman-Monteith reference evapotranspiration ET_0 , achieving **RMSE of 0.010–0.018** across all zones on temporally split test sets.
- Deployed the models behind a **Flask API with a Flutter cross-platform app**, converting ET_0 into crop-level irrigation recommendations via FAO K_c coefficients for **100+ crops** across growth stages.

PeerFit: Social Sports Events Platform

[Live site](#) 

- Built, deployed, and grew a geo-based sports events app (**React Native**, **Node.js**, **PostgreSQL**) to **500+ active users** and **300+ events**, with a product-analytics layer for engagement and retention tracking.

Skills

ML / Deep Learning: PyTorch, TensorFlow/Keras, Hugging Face Transformers, Scikit-learn, OpenCV, NLP, Computer Vision, fine-tuning, model evaluation on imbalanced data

Data & Engineering: Python, SQL, Pandas, NumPy, PostgreSQL, ETL pipelines, Power BI/DAX, statistical analysis & experimentation

Tools & Deployment: Docker, Git, Flask, FastAPI, Linux, edge deployment (Raspberry Pi)

Leadership & Activities

Peer Success Tutor & Learning Fellow, AUI: Mentored **160+ students** over **250+ hours** in AI, distributed programming, and mathematics.

Humanitarian Work (Rahma AUI, El Ghad Association): Organized initiatives for vulnerable groups.

Sports: University basketball & American football; skiing, taekwondo.

Languages

French: Bilingual — **English:** Bilingual — **Arabic:** Native — **Spanish:** Beginner