

Ibrahim El Abdi

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Data Science and AI Engineering student seeking a 2026 end-of-studies internship, with strong skills in machine learning, optimization, and data-driven problem solving.

PROFESSIONAL EXPERIENCE

GROUPE CRÉDIT AGRICOLE

Paris, France

Data Science Intern

Jan 2025 – Jun 2025

- Built and deployed a collateral optimization model combining linear programming and heuristics to improve financing efficiency.
- Developed automated ETL pipelines (Python, SQL) to ingest and prepare financial datasets for optimization workflows.
- Applied statistical analysis and predictive modeling on credit and risk datasets to identify patterns for decision-making.
- Reduced computation time by 10x through algorithmic redesign and data structure optimization.

SOCIÉTÉ GÉNÉRALE

Paris, France

Data Science Intern

Jul 2024 – Dec 2024

- Conducted data exploration and modeling on automotive remarketing and financial risk datasets.
- Developed interactive analytics dashboards in Power BI improving audit cycle speed and reporting clarity.
- Built an AI-based signature verification model using CNNs to strengthen document integrity checks.
- Automated financial reporting workflows using Python + VBA, reducing manual processing time.

AIR FRANCE

Paris, France

Optimization Project

Feb 2024 – Apr 2024

- Designed mathematical models for passenger placement using mixed-integer linear programming (MILP).
- Integrated constraints such as aircraft balance, PRM placement, and group seating for operational feasibility.
- Implemented and solved models with Gurobi; analyzed KPIs (boarding time, satisfaction scores).

SIANA

Casablanca, Morocco

Data Science Intern

Sep 2023 – Jan 2024

- Built ML pipelines to diagnose defects in train bearings using vibration and sensor data.
- Used K-Means to generate pseudo-labels for unlabelled datasets and trained classifiers (SVM, ANN, Autoencoder).
- Applied feature engineering and SQL-based preprocessing for industrial time-series datasets.

TANGER MED (TMSA)

Tangier, Morocco

IoT Data Intern

Jun 2023 – Aug 2023

- Implemented real-time IoT ingestion using MQTT and automated SQL pipelines.
- Integrated sensor data into the OpenRemote IoT platform for visualization and maintenance alerts.

TECHNICAL

SKILLS

- **Programming:** Python, SQL, VBA, C/C++
- **Machine Learning:** Classification, Clustering, Time Series, Dimensionality Reduction, Feature Engineering
- **Deep Learning:** CNNs, Autoencoders, RNNs (PyTorch, TensorFlow/Keras)
- **Optimization:** Linear/Mixed-Integer Programming, Heuristics, Gurobi, OR-Tools
- **Data Engineering:** ETL Pipelines, MQTT, APIs, Data Modeling, Workflow Automation
- **Big Data & Cloud:** PySpark, Hadoop, Docker, AWS (S3, EC2), Azure ML (beginner)
- **Tools:** Git, Power BI, OpenRemote, Jupyter, Airflow (basic)
- **Languages:** French (Full Professional), English (Full Professional)

PROJECTS

- **Portfolio Optimization Engine** – Developed a Python tool using Markowitz and Black-Litterman models; integrated risk-adjusted metrics (VaR, CVaR); achieved 18% volatility reduction.
- **Sales Forecasting System** – Built an LSTM-based model for multivariate retail forecasting; improved MAPE by 22% vs baseline ARIMA.
- **Document Fraud Detection (CNN)** – Created a convolutional neural network to detect forged signatures with over 93% accuracy.
- **Reinforcement Learning for Vehicle Routing** – Implemented DQN-based solver for last-mile delivery (academic).
- **Passenger Satisfaction Simulator** – Simulated boarding processes based on Air France optimization outputs using Python discrete-event simulation.

EDUCATION

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|---|----------------|
| Ecole Centrale Casablanca | Morocco |
| <i>Master of Engineering (MEng)</i> | 2022 – Present |
| CentraleSupélec | France |
| <i>Master of Engineering (MEng), Artificial Intelligence & Data Science</i> | 2023 – 2024 |
| CPGE – Classes Préparatoires | Morocco |
| <i>Engineering Preparatory Classes</i> | 2020 – 2022 |

CERTIFICATIONS

- Foundations of Project Management
- Project Planning: Putting It All Together
- TOEIC (935/990)
- Documentary Research
- UML Software Engineering