SAWADOGO Rimsongdo Roger

rogersawadogo@gmail.com   —   +212 619 933 585   —   LinkedIn: rogersaw

Institut National des Postes et Télécommunications (INPT), Rabat, Morocco

Professional Summary

Data Scientist with expertise in machine learning, deep learning, data engineering (ETL, Apache Airflow), and full-stack software development (Node.js, React, MongoDB, PostgreSQL). Skilled in designing and deploying end-to-end systems from data acquisition to production-ready applications. Proven experience in spectral data analysis, time-series forecasting, computer vision, and natural language processing.

Education

Preparatory Classes – Physics, Chemistry and Engineering Sciences   2021 – 2023
GPGE Moulay Idriss, Fes, Morocco

Engineering Studies – Information Technologies   2023 – 2026
Institut National des Postes et Télécommunications (INPT), Rabat, Morocco

Technical Skills

Programming Languages

Python (Pandas, NumPy, scikit-learn, TensorFlow/Keras), JavaScript (Node.js, React), C, Java

Machine Learning & AI

- **Supervised Learning:** Regression (LASSO, PLSR), Classification (CNNs, ResNet)
- **Unsupervised Learning:** PCA, Clustering (K-means, Hierarchical)
- **Deep Learning:** LSTM (time-series forecasting), Transformers (NLP), Transfer Learning
- **Model Optimization:** Regularization, Hyperparameter Tuning, Cross-Validation

Data Engineering

ETL/ELT Pipelines (Apache Airflow), Database Design (PostgreSQL, MongoDB)
Data Visualization (Plotly, Matplotlib), Dashboarding (Streamlit)

Software Development

- Backend: REST APIs (Express.js), Authentication (JWT), Microservices
- Frontend: React, Responsive Design
- DevOps: Docker, CI/CD (GitHub Actions), Cloud Integration (Cloudinary)

Tools & Platforms

Git, VS Code, Jupyter Notebook, PostgreSQL, MongoDB, Linux

Soft Skills

Problem-Solving, Analytical Thinking, Adaptability, Communication, Team Collaboration, Project Management, Continuous Learning, Creativity, Attention to Detail, Time Management

Experience

Data Science Intern Photons Analysis - UM6P *Jul 2025 – Aug 2025*

- Developed PCA + regression models(PLSR, LASSO, RL) to predict soil composition from spectral reflectance data using Python (scikit-learn, pandas).
- Applied logarithmic transformation on target variable during training, improving cross-validation score.
- Implemented robust model evaluation with k-fold cross-validation.

AIoT Developer Intern Burkina Business Incubator *Jul 2024*

- Designed and trained a ResNet-based Convolutional Neural Network for tomato leaf disease detection.
- Deployed the model as a mobile application with TensorFlow Lite and Flutter for offline farmer use.

Academic Projects

Millet Price Forecasting (LSTM) Data Science Project

- Collected and preprocessed monthly millet price data from Burkina Faso for time-series modeling.
- Built and tuned an LSTM neural network (TensorFlow/Keras) to forecast prices up to two years ahead.
- Visualized historical trends and future predictions using Plotly for interactive analysis.

TTI Analysis in Casablanca Data Analysis Project

- Analyzed Travel Time Index (TTI) by day of the week using traffic and mobility datasets in Excel and Python.
- Cross-referenced TTI data with urban variables such as population density, road infrastructure, and public transport availability.
- Performed clustering on communes to identify mobility patterns and propose traffic optimization strategies.

BayirExpress Crowdshipping Platform Full-Stack & Data Engineering Project

- Designed and developed a multilingual (French/English) crowdshipping platform using Node.js, Express, and React, enabling secure user authentication with JWT and role-based access control.
- Built and deployed a CI/CD pipeline with GitHub Actions and Docker to ensure seamless integration and delivery.
- Implemented a data engineering workflow with Apache Airflow to extract, transform, and load (ETL) operational data from MongoDB to PostgreSQL.
- Created an interactive Streamlit dashboard for analytics and visualization of shipment trends, user activity, and marketplace performance.
- Integration of a Retrieval-Augmented Generation (RAG) system to allow users to query platform knowledge base and shipment history in natural language.

Certifications

Python for Data Science – Udemy Full-Stack Development – Helsinki University
Getting Started with Docker – SimpliLearn Fine-Tuning LLM – Udemy

Languages

French (Fluent), English (Professional), Spanish (Beginner)