



# Fouad AURAG

Intern - AI Research

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## EDUCATION

**Mohammed Premier University, Nador, Morocco** | *Master's Degree* **2024**

- Coursework: Deep Learning, Machine Learning, NLP, Big Data, Security, Cloud Computing, Web Development, and Database Management.

**Mohammed Premier University, Nador, Morocco** | *Bachelor's Degree* **2022**

- Coursework: Databases, Java, Linux Programming, Web Development, Networking, Linear Algebra, Optimization, Probability, and Statistics.

## EXPERIENCE

**Commissariat à l'Énergie Atomique et aux Énergies Alternatives** **Grenoble, France**

*Internship – AI Research (On-site)*

*May 2025 - November 2025*

- I am developing a tool that enables efficient training of AI models by reducing both memory usage and computational cost.

**OMDATA Consulting**

**Nantes, France**

*Internship - Web Development (Remote)*

*December 2021 - August 2022*

- Developed a web application for employees to register monthly activities, validate them, and generate invoices.

## ACADEMIC PROJECTS

**Aspectify: Aspect-Based Sentiment Analysis Using LLMs**

- Master's thesis focused on leveraging open-source large language models for Aspect-Based Sentiment Analysis.
- The process involved fine-tuning LLMs and prompt engineering to design the best prompts.
- Developed and evaluated multiple LLMs, achieving state-of-the-art performance.

**Binarized-CNN: CNN Model with Binary Weights and Activations**

- Implemented and compared a standard CNN and a Binarized CNN for CIFAR-10 classification.
- Significantly reduced memory usage ( $32\times$  less) and computational cost.

**Credit Card Fraud Detection**

- Trained and evaluated a set of models to predict fraudulent transactions.
- Handled a highly imbalanced dataset (99.4% vs 0.6%).

**Multi-Source ETL Integration: On-Premise and Cloud**

- Led an ETL project for data extraction, transformation, and loading into a Data Warehouse across on-premise and Azure environments using SSIS.
- Automated the process with a Java script using multi-threading to accelerate execution.

## SKILLS & INTERESTS

**Technical:** Python, Java, PyTorch, Git, Gitlab, Slurm, Docker, MongoDB, Vibe Coding

**Language:** Arabic (native), French (fluent), English (fluent)

**Volunteering:** I2A Lead (2023–2025), AtlasIA Core Team (2024–2025)

**Interests:** Sport, Cooking, Building AI Solutions, Research