

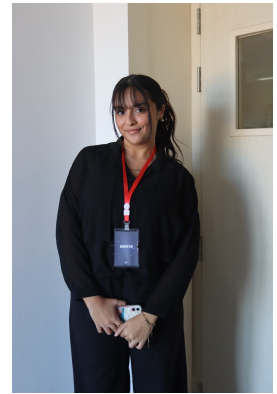
# Sarra Arab

AI Engineer — Final-Year Master's Student

**Location:** Algiers, Algeria

**Email:** sarra.arab@ensia.edu.dz

**Portfolio:** sarraarab.vercel.app



## Professional Summary

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Final-year AI student at the National Higher School of Artificial Intelligence (ENSIA), Algiers. Focused on developing impactful AI systems across geospatial, medical, and energy sectors. Experienced with machine learning, deep learning, reinforcement learning, and satellite imagery analysis.

## Skills

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**Languages:** Python, C++, JavaScript, SQL

**AI/ML:** PyTorch, TensorFlow, Keras, scikit-learn, OpenCV, Vision Transformers

**Data Tools:** Pandas, NumPy, Matplotlib, Seaborn

**Dev Tools:** Git, Docker, VS Code, Jupyter, Colab, Postman

**Databases:** MongoDB, MySQL

**Soft Skills:** Critical thinking, Communication, Collaboration, Research writing

## Education

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### Master's in Artificial Intelligence

National Higher School of Artificial Intelligence (ENSIA), Algiers

Sep 2021 – Jun 2026 (*expected*)

Relevant coursework: Deep Learning, NLP, Optimization, Computer Vision, RL

## Experience

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### AI Intern – Algerian Space Agency

Algiers, June 2024 – Sep 2024

- Developed vegetation classification pipelines using Sentinel and Landsat imagery
- Implemented early and late fusion with deep learning models
- Used ViT and RANSAC for robust object detection in satellite data
- Contributed to scalable GeoAI workflows for national mapping tasks

## Projects

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### Forecasting Renewable Energy in Algeria: A Model Comparison Study

Published in *Springer's Lecture Notes in Networks and Systems* (MCCSAI 2025)

- Compared traditional, ML, deep learning, and foundation models (Lag-LLaMA, TimeSFM)
- Used real-world solar and wind data from the Adrar region
- Evaluated performance on accuracy, robustness, and scalability

### Speech Recognition for Darija and Kabyle

- Fine-tuned OpenAI's Whisper model to transcribe low-resource North African languages
- Built a preprocessing and evaluation pipeline with domain-specific audio corpora
- Improved transcription accuracy using phonetic-aware training strategies

### Monkeypox Detection Using Vision Transformers

- Developed ViT-based classifier for skin lesion recognition
- Achieved 95.4% accuracy on a real-world image dataset
- Benchmarked against CNNs (AlexNet, ResNet50) for performance comparison

## Languages

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Arabic (Native), French (Native), English (Advanced)