

Souissi Majd

Engineering Student in Artificial Intelligence

Seeking a 6-month final-year internship starting February 2026

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PROFESSIONAL EXPERIENCE

AI Research Intern

Data Engineering and Semantic Research Unit, Faculty of Sciences

Aug 2025 – Sep 2025

Sfax, Tunisia

Vision-Language Models for Video Captioning and Semantic Retrieval

- Study and implementation of **state-of-the-art VLMs** for video captioning and semantic retrieval.
- Evaluation of a **multimodal retrieval pipeline**, testing multiple models such as **Qwen-VL 2.5** and **InternVL**.
- Performance analysis and writing of a **detailed research report** presenting comparative results.
- **Keywords:** Multimodal retrieval, Vision-Language, RAG, FAISS, Kafka, Python

AI Research Intern

Larina Research Laboratory for Intelligent Networks and Nanotechnology

Jun 2025 – Aug 2025

Ben Arous, Tunisia

Explainable CNNs for Agricultural Image Classification

- Development of an **explainable CNN** for almond shell classification, interpretable via **Grad-CAM** and **LIME**.
- Integration of the model into a **Flutter mobile application** for real-time classification.
- **Publication & presentation:** Paper accepted at the international conference *OCTA'2025 Multi-Conference, "Improving Almond Variety Identification through Wavelet-Based Image Augmentation"*, November 2025.
- **Keywords:** XAI, CNN, Grad-CAM, LIME, Flutter

EDUCATION

Higher National Engineering School of Tunis (ENSIT)

Research Master in Data Science (M2)

Tunis, Tunisia

Sep 2025 – Sep 2026

Engineering in Applied Mathematics and Modeling

Sep 2023 – Sep 2026

Preparatory Institute for Engineering Studies of Sfax (IPEIS)

Preparatory Cycle, Physics and Chemistry

Sfax, Tunisia

Sep 2021 – Jul 2023

Sadok Feki High School

Baccalaureate in Mathematics (Honors)

Sfax, Tunisia

Sep 2020 – Jul 2021

EXTRACURRICULAR ACTIVITIES

- **Media Manager** of the **Vanguard Chess ENSIT Club** and **Marketing Manager** of the **Nerdata ENSIT Club**
- 6th place at **GeeksHack 4.0**, 14th at **Codentine** and 1st place in one of the **DataQuest (AI hackathon)** competitions.

ACADEMIC PROJECTS

PneumoXAI: Interpretable Analysis of Chest X-rays

- Design of a **CNN** for pneumonia detection on chest X-rays, with interpretability via **Grad-CAM** and **LIME**.
- Development of a **data augmentation pipeline** including **SMOTE** for class balancing.
- Creation of a **Flask web application** with a **LangChain chatbot** for medical predictions and interpretations.
- **Keywords:** CNN, Grad-CAM, LIME, SMOTE, Flask, LangChain, XAI

PodSum: Intelligent Podcast Summarization

- Development of a pipeline combining **Whisper** for audio transcription and **Qwen LLM** for summary generation.
- Implementation of a **RAG module** enabling user-content interaction.
- Evaluation of the pipeline's performance in terms of accuracy and relevance on multiple datasets.
- **Keywords:** Whisper, BERT, Qwen LLM, NLP, RAG (LangChain, FAISS)

AutoCoverLetterRAG – Automated Motivation Letter Generator

- Built a full-stack **React.js + Node.js** web application that generates motivation letters from a user's CV and job description.
- Designed a **RAG pipeline** combining document parsing, embeddings, and retrieval to link candidate skills to role requirements.
- Automated LaTeX compilation to produce clean, professional **PDF motivation letters** with dynamic content generation.
- **Keywords:** React.js, Node.js, LangChain, RAG, FAISS, LLMs, LaTeX, PDF generation

SKILLS

AI & Deep Learning: PyTorch, TensorFlow, Keras, Hugging Face, LangChain, NVIDIA NeMo/NIM, OpenCV, U-Net, ViT, CLIP, Qwen-VL, LLMs, RAG, BERT, LSTM, XAI (LIME, SHAP, Grad-CAM), Scikit-learn, XGBoost, Librosa, FFmpeg

Mathematics & Optimization: Linear Algebra, Probability, Stochastic Processes, Time Series (ARIMA, Prophet), Genetic Algorithms, Linear Programming, Operations Research, Supply Chain Optimization

Development & MLOps: Python, C/C++, Java (JEE), Dart (Flutter), Flask, FastAPI, Docker, ONNX, Git, GitHub, CI/CD

Data & Databases: SQL, PL/SQL, MySQL, MongoDB, Oracle DB, FAISS, Chroma, Kafka, Power BI, Tableau, IBM SPSS, Seaborn, Matplotlib

Languages: Arabic (Native), English (930 TOEIC), French (Fluent)

CERTIFICATES

AWS: Machine Learning Foundations **DataCamp:** Data Scientist Associate

NVIDIA: Deep Learning Fundamentals, Computer Vision for Industrial Inspection, Generative AI with Diffusion Models, Rapid Application Development With LLMs

HuggingFace: AI Agents Fundamentals **Microsoft:** Azure AI Fundamentals (AI-900), Azure Data Fundamentals (DP-900)