



# Meriem Sakka AI Engineer

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## PROFILE

AI Engineer with a background in Mechatronics. Passionate about developing AI-driven solutions to solve real-world challenges and drive innovation. Constantly curious, always coding.

## EXPERIENCE

- Data Scientist Intern, WEVIOO**02.2024 – 08.2024 | Tunis, Tunisia
  - Developed an end-to-end sentiment analysis platform that automatically collects customer feedback from bank Facebook pages using a **custom Flask backend** with **Selenium** web automation, handling dynamic content and pagination
  - Deployed **TunBERT** — a BERT model pre-trained on Tunisian dialect — to accurately classify sentiment in informal, mixed Arabic/French text, addressing the challenges of local vernacular
  - Transformed raw sentiment data into actionable insights through **interactive dashboards** featuring temporal trend analysis and keyword clustering
  - Delivered real-time monitoring solution to track financial product perception
- Robotics Engineer Intern, Enova Robotics**07.2023 – 08.2023 | Sousse, Tunisia
  - Integrated dual LIDAR sensors on an autonomous robot for 360° environmental mapping
  - Optimized trajectory planning via sensor fusion, enhancing navigation in dynamic environments

## EDUCATION

- National Engineering Diploma in Mechatronics,**09.2021 – 10.2024 | Ariana, Tunisia  
National School of Engineering of Carthage
- Pre-engineering Cycle in Mathematics-Physics,**09.2019 – 06.2021 | Monastir, Tunisia  
Monastir Preparatory Engineering Institute

## PROJECTS

- Inquiere – Smart PDF Chatbot, Personal Project**
  - Developed an AI chatbot that lets users upload PDFs and ask questions in natural language, with answers sourced directly from document content.
  - Engineered a **RAG (Retrieval-Augmented Generation)** pipeline:
    - Text extraction and chunking with PyPDF2 and LangChain.
    - Vector embeddings (Sentence Transformers) stored in ChromaDB for semantic search.
    - Response generation via **Mistral 3** with context from retrieved document passages
  - Designed an intuitive UI and containerized the app with **Docker** for scalability.
- Coverly.ai – AI Cover Letter Generator, Personal Project**
  - Built an AI platform that **automatically generates personalized cover letters** by analyzing CVs and job descriptions using **Google Gemini API**.
  - Implemented **multilingual support** (EN/FR/AR) with RTL layout and **smart job-CV matching algorithms** (Flask backend).
  - Implemented **user-centric features**: real-time editing, version history, and PDF export
  - Designed a **responsive UI** (React + Tailwind CSS) with dark mode for optimal UX.
- Classically Inspired Quantum Image Processing, Academic Project**02.2023 – 05.2023
  - Encoded classical images into quantum states using **Qiskit** and successfully retrieved them on **IBMQ Belem** via IBM Quantum Lab
  - Explored quantum algorithms for image processing, implementing **quantum Fourier transforms** and **amplitude encoding** techniques

## SKILLS

**Programming:** Python · SQL · JavaScript

**AI/ML:** Scikit-learn · TensorFlow · PyTorch · Transformers · LangChain · LoRA Fine-Tuning · Retrieval-Augmented Generation (RAG) · Vector DBs

**Data:** Pandas · NumPy · Matplotlib · Seaborn · Plotly

**Tools & Platforms:** Git · Docker

## LANGUAGES

**English** — Fluent  
TOEIC Score: 945/990 (Advanced Level - C1)

**French** — Proficient

**Arabic** — Native/Bilingual