Houssem Eddine

El Menzah 6, Ariana • 46210801 • houssemeddineds@gmail.com • linkedin.com/in/houssemeddineds

---

AI Engineer specializing in **medical imaging**, **geospatial intelligence**, and **agentic AI**. Experienced in building and deploying real-world systems with **Python**, **PyTorch**, **MONAI**, **LangChain**, and **LangGraph**. Proven track record in developing **3D segmentation** pipelines, **AI-driven diagnostics**, and intelligent automation across healthcare and enterprise applications.

WORK EXPERIENCE

Alight Consulting   Germany • Jun 2025 - Sep 2025
Medical AI Engineer Intern • Internship

- Designed and implemented an **agentic AI system** (LangChain/CrewAI) for heart image analysis, **reducing time-to-prognosis by 30%**.
- Developed **AI-driven decision support tools** for cardiac assessment, improving the **early-stage identification rate by 25%** over baseline.
- Trained a **Large Language Model (LLM)** using clinician feedback (RLHF) across **200+ cardiac case reports**, increasing recommendation **accuracy by 18%**.
- Applied **explainability methods (SHAP, Grad-CAM)** to interpret **95% of model predictions**, which significantly increased clinician trust and adoption.

CMA CGM   France • Jan 2025 - Jun 2025
Geospatial AI Engineer • Contractor

- Reached **92.4% IoU** with a U-Net model on **multimodal satellite** data, improving classification **accuracy** by **8%** and reducing **labeling time** by **70%.**
- Built an **agentic AI system** with **CrewAI**, **automating analysis** and **reporting**, cutting human effort by **95%** and boosting workflow speed **4.6×.**
- **Fine-tuned** a forest-trained segmentation model to handle arid and desert imagery, improving **cross-terrain** generalization by **31%** and enabling real-time geospatial visualization via **API integration**

Newrest   Tunis, Tunisia • Jun 2023 - Sep 2023
Data Analyst – Forecasting & Supply Chain Automation • Full-time

- Led the end-to-end deployment of an **ML forecasting system** for food inventory across 15+ airport shops, **reducing food waste by 55%** and **eliminating stockouts** within three months.
- Collaborated weekly with managers to align AI model outputs with logistics, ensuring **seamless integration** and **improved inventory management**.

PROJECTS

Multi-Modal Brain Safety Agent System   Sep 2025 - Dec 2025
Esprit University

• **Engineered** a multimodal agent system for brain safety using **Groq**, cutting **Time-to-First-Token by 40%** and enabling **real-time** decision processing.
• **Integrated** a full-duplex, secure video module with **TTS**, enabling **instant remote intervention** and reducing **response latency by 65%**.
• **Designed** an autonomous workflow to process **video and sensor data concurrently**, boosting **system throughput by 3.2×** and ensuring **fault-tolerant** performance.

VOLUNTEERING & LEADERSHIP

DeepFlow   Jun 2023 - Present
Tech Manager   El Menzah 6, Ariana

• **Led 15+ AI/ML workshops over 3 years**, teaching algorithm design and healthcare data analysis, strengthening participants' proficiency in **medical imaging and predictive modeling**.
• **Mentored 20+ junior members** on real-world AI projects, guiding them in building **end-to-end healthcare AI solutions** and improving project delivery efficiency by **40%**.

SKILLS

Programming & Tools

- Python (NumPy, Pandas, Matplotlib, Seaborn)
- PyTorch
- Scikit-Learn
- TensorFlow
- SQL
- CrewAi
- MONAI
- LangChain
- LangGraph

AI Techniques & Methods

- Data Analysis
- Data Cleaning
- Forecasting
- Deep Learning
- Supervised Learning
- Cluster Analysis
- LLMs
- Data Preparation
- Financial Data Analysis
- Semantic Segmentation

Business Knowledge

- Supply Chain & Inventory Management
- Business Analysis
- Financial Analysis
- Automation Strategy

Languages

- French : B2
- English : C1
- Arabic : C1
- German : A2
- Spanish : A2

EDUCATION

Master of Engineering in Computer Science specializing in Artificial Intelligence

ESPRIT University, Tunisia
Tunisia
GPA: 16/20
Jun 2022 - Jun 2027