

Mhamed Garbaa

✉ Email ☎ +216 28 821 705 ✉ LinkedIn ✉ GitHub

Professional Experience

AI Intern – Explainable AI for Financial Applications, Talan Tunisia

June 2025 – August 2025

- Designed and deployed a **generative AI prototype for credit scoring**, integrating **LLMs (Mistral, Llama 3)** with explainability techniques (XAI) to enhance transparency and trust.

- Developed a **scalable and cloud-ready pipeline** integrating APIs and interactive dashboards to foster cross-team collaboration.

- Contributed to research on adapting large models toward more efficient architectures for **cost-effective production deployment**.

Keywords: Generative AI, Cloud, APIs, LLMs, Explainability, Financial AI

AI Intern – Conversational and Multimodal AI, Talan Tunisia

July 2024 – August 2024

- Developed a **multimodal chatbot** using RAG (ChemBERTa + toxicity model), SMfold for 3D protein prediction, and VR for immersive interaction.

- Applied **generative AI and intelligent search techniques** to provide accurate and contextual responses.

- Cloud integration and scalability optimization of the system for industrial application.

Keywords: Conversational AI, RAG, Intelligent Search, Generative AI, Cloud

Projects

MyBank Audit System [GitHub]

- Developed a **secure banking audit system** with real-time tracking, logging, and RBAC access control.
- Implemented an **anomaly detection engine** to automatically identify suspicious operations.
- Integrated a **conversational LLM assistant (Llama3)** for account supervision and contextual analysis.
- Docker containerization for **cloud-ready** deployment.

Keywords: Django, REST APIs, LLM, Security, Docker, SQLite

Distraction Detection Agent [GitHub]

- Developed a **real-time vision system** monitoring driver's gaze and phone usage to detect distractions.
- Emphasized a **lightweight deployment** for real-time operation.

Keywords: Computer Vision, Real-Time, Lightweight Models, Driver Monitoring

Industrial ECG Analysis System ECG App

- Developed a **real medical use case** with machine learning: ECG signal preprocessing, feature extraction, and patient classification.
- Optimized model pipelines for **deployment and interpretability**.

Keywords: ECG, Medical AI, Signal Processing, Deployment

Education

ENET'Com, National School of Electronics and Telecommunications of Sfax

2023 – Present

Keywords: Signal Processing, Network Security, C, Java, Cloud Computing, DevOps, Spring Boot, Matlab, MySQL

IPEIN, Preparatory Institute for Engineering Studies of Nabeul

2022 – 2023

Keywords: Linear Algebra, Python

ESSTHS, School of Sciences and Technology of Hammam Sousse

2021 – 2022

Keywords: Advanced Mathematical Problem Solving

Technical Skills

- **Programming Languages:** Python, Java, C, PHP, Matlab, HTML/CSS/JS, SQL
- **AI/ML/DL:** Generative AI, Conversational AI, Intelligent Search, LLMs (Mistral, Llama 3, ESM-2), Explainability (XAI), AI Agents, RAG, LangChain, CrewAI
- **Cybersecurity:** Intrusion Detection, Anomaly Detection, Network Security
- **Cloud & DevOps:** AWS, OpenStack, Docker, APIs, Containerization, Virtualization, DevOps
- **Computer Vision:** OpenCV, Mediapipe, YOLO, SMfold, 3D Protein Prediction
- **Data Engineering:** ETL Pipelines, Data Integration, Big Data
- **Other:** Signal Processing, Scientific Writing, VR Environments

Certifications

AI Agents in LangGraph – DeepLearning.ai

MLOps Fundamentals – DataCamp

Machine Learning in Production – DeepLearning.ai

OCI Generative AI Certification – Oracle

Microsoft AI Fundamentals

Microsoft Azure Fundamentals

Supervised Learning with scikit-learn – DataCamp

Containerization and Virtualization – DataCamp

Competitions

3rd Place – NASA Space Apps Challenge

3rd Place – TomorrowLab (TPL / DAAD)

Finalist – Process Optimization (4C ENET'Com)

Volunteer Involvement

President – TUNSA Club

Vice President Training and Development – JCI Korba

Skills: Leadership, Strategic Planning, Team Collaboration

Languages

Arabic: Native Language **English:** Professional **French:** Professional **German:** Elementary