AHMED LOUAY ARAOUR

Phone: (+216) 97-980-842 | **Email:** AhmedLouay.araour@esprit.tn
Location: Tunis, Tunisia
LinkedIn: linkedin.com/in/ahmed-louay-araour | **GitHub:** github.com/AlienBTw

OBJECTIVE

A final-year Data Science Engineering Student seeking a 6-month PFE in Deep Learning, Machine Learning, Computer Vision, or NLP. Eager to apply hands-on experience in Applied AI, RAG, LLM fine-tuning, and distributed training on GPU clusters to challenging projects.

EDUCATION

Engineering Degree in Computer Science (Data Science)

ESPRIT, Tunis | 2021 – Present

TECHNICAL SKILLS

AI/ML: PyTorch, Scikit-learn, TensorFlow, NLP, LLMs, Computer Vision, MLOps, Spark

Software Engineering: Python, Flask, React, JavaScript, C++, Java, Spring Boot, Symfony

DevOps/Tools: Docker, Jenkins, Git, SQL, Hadoop, DevOps

PROFESSIONAL EXPERIENCE

AI Engineering Intern – RAG-based Student Assistant

Esprit Inc. | Tunis, Tunisia | Summer 2025

- Architected and developed a Retrieval-Augmented Generation (RAG) system to serve as an autonomous learning assistant for students, significantly improving access to course information
- Built and integrated robust NLP pipelines for semantic search and question answering, connecting to institutional knowledge bases via RESTful APIs
- Utilized vector databases to store and efficiently retrieve embeddings from a large corpus of course materials, enabling real-time, context-aware responses

Computer Vision Intern – DSE Trigger System

Greentech | Berlin, Germany (Remote) | Summer 2025

- Designed and implemented a Digital Sound Environment (DSE) system featuring a real-time trigger mechanism based on visual cues
- Utilized computer vision models to accurately detect and classify specific movements, which in turn activated corresponding audio triggers
- Focused on the seamless integration of movement classification and audio response to create an interactive experience

AI/Systems Intern – GPU Cluster for Intel GETi

Technozor | Tunis, Tunisia | Summer 2025

- Optimized and parallelized computer vision model training pipelines on a multi-node GPU cluster using the Intel GETi platform, reducing training times by over 30%
- Developed scripts to scale distributed inference tasks, ensuring high availability and efficient resource utilization
- Implemented monitoring and logging tools to track system performance and model accuracy across the GPU cluster

Web Development Intern

Voyages Sans Frontières | Tunis, Tunisia | 2024

- Developed a Python/Flask web application to ingest, analyze, and predict flight delays using regression and time-series ML models

Technical Support Intern (Observation)

Total Energies | Tunis, Tunisia | 2023

- Completed a one-month introductory internship in the technical department to gain foundational professional experience and discover the professional world
- Provided basic technical assistance and observed the resolution of IT issues within a large corporate environment

KEY PROJECTS

Intelligent News Agent (NLP & LLMs)

ESPRIT | Ongoing

- Designed and built an AI-powered news agent that filters, summarizes, and personalizes content
- Utilized transformer architectures (e.g., T5 for summarization) and vector search with FAISS for semantic content retrieval

Lung Nodule Detection & Classification (Deep Learning)

Partnership with Institut Salah Azaiez

- Created a full-stack deep learning application to detect and classify lung nodule malignancy from CT scans in partnership with Institut Salah Azaiez, Tunisia's leading cancer center
- Implemented a CNN (ResNet-based) backend API with Flask and Node.js, and a user-friendly frontend with React for image upload and result visualization
- Collaborated with medical professionals to develop clinically relevant AI solutions for cancer diagnosis

Customer Churn Prediction (MLOps CI/CD)

- Engineered a complete, automated MLOps pipeline to predict customer churn
- The system uses Jenkins for CI/CD, Docker for containerization, and a Flask API for model serving, enabling automatic retraining and deployment

Emotion Classification from Audio

- Developed a novel system to classify human emotions from audio signals
- Extracted MFCC features from raw audio and fed them into a hybrid CNN-LSTM model to capture both spectral and temporal patterns with high accuracy

EHR Medical System

- Developed a comprehensive Electronic Health Record (EHR) system using JavaFX for the desktop client and Symfony 5 for the backend API, enabling secure management of patient data

Laboratory Stock Tracker

- Created a desktop application for laboratory stock management using C++ and the Qt framework, allowing for real-time tracking of inventory and supplies

2D Video Game

- Engineered a 2D video game from scratch using C and the SDL 1.2 library, implementing core game mechanics, rendering, and user input handling as an early university project

CERTIFICATIONS

- IBM Data Science Specialization
- IBM AI Engineering
- NVIDIA Fundamentals of Deep Learning
- NVIDIA Applications of AI for Anomaly Detection (Ongoing)

AWARDS & ACHIEVEMENTS

- **5th Place - ESPRIT Bal des Projets** | June 2023

LANGUAGES

Arabic: Native | **French:** B2 | **English:** B2