

# Mouhib Chatti

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## Profile

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Motivated Data Scientist and AI Engineer at INSAT with a strong passion for building intelligent systems and extracting insights from complex data. Skilled in end-to-end ML pipelines—from exploratory analysis and model development to deployment and monitoring at scale. Deep expertise in LLMs, RAG architectures, and generative AI, complemented by advanced cloud and DevOps capabilities. Committed to driving innovation through data-centric solutions in fast-paced, technology-driven environments.

## Skills

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### AI & Machine Learning :

LLMs, RAG, Fine-tuning, LangChain, LlamaIndex, HuggingFace, Vector DBs (Pinecone, FAISS, Chroma)

### Deep Learning:

PyTorch, TensorFlow, Transformers, PEFT/LoRA, Diffusion Models, Computer Vision

### Data Engineering & MLOps:

MLflow, DVC, Airflow, Spark, dbt, model monitoring, ML CI/CD pipelines

### Data Science :

Python, Scikit-learn, XGBoost, LightGBM, TensorFlow, Keras, PyTorch, Pandas, NumPy, Imbalanced-learn

## Professional Experience

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2025/10  
Tunis

### Data Scientist

GTI

- Trained a Machine Learning model and developed a Python API for Trade Finance risk assessment, analyzing transaction data to generate real-time risk scores and automated recommendations
- Developed a scalable FastAPI service that leverages a trained NLP/NER Machine Learning model to extract and structure complex address data. Engineered advanced pre/post-processing pipelines using RapidFuzz and reference datasets to ensure high data accuracy and standardized outputs (e.g., ISO country codes), fully containerized using Docker.

2025/02 – 2025/08  
Tunis

### Intern

GTI

- Improved the banking transaction system by developing a machine learning model to detect and score threats, and integrating it into a scalable data pipeline using Apache Kafka and Apache Spark, capable of processing heavy data flows for accurate fraud detection and real-time monitoring.

2024/07 – 2024/09  
lac 2, Tunisia

### Intern

Sopra HR

- Collaborated closely with the ProdOps team on server migration projects, ensuring smooth transitions with minimal downtime and high client satisfaction.
- Configured and managed CSR certificates, significantly enhancing the security and compliance posture of client systems.

2024/02 – 2024/06  
Tunis

### Intern

CCN Services

- Engineered a fully integrated system for automated Active Directory scans, including a robust web application and desktop agent, enabling streamlined security and compliance audits across hybrid cloud environments.

2023/07 – 2023/08  
lac 1, Tunisia

### Intern

3S

- Contributed to the full lifecycle of web development using ASP.NET, from initial design through to deployment on Azure, ensuring a seamless user experience and effective performance optimization.
- Played a key role in debugging and refining code based on user feedback, enhancing overall system functionality and user satisfaction.

## Projects

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2025/11

### AI Banking Regulation Assistant

Generative AI · RAG · Local LLM

- Built an end-to-end RAG chatbot answering complex questions on Tunisian banking regulations using a locally hosted LLM (Ollama) — no cloud dependency.
- Implemented multi-source retrieval pipeline combining PDF ingestion (PyPDF), ChromaDB vector store, and live web scraping (BeautifulSoup4) for up-to-date context.
- Exposed the system via a FastAPI REST interface; fully containerized with Docker for reproducible, offline-ready deployment.

Python · FastAPI · Ollama · LangChain · ChromaDB · PyPDF · BeautifulSoup4 · Docker  
<https://github.com/Mouhib912/Banking-Assistant>


2024/11

### AI Document Classification System

Computer Vision · YOLOv8 · MLOps

- Designed and deployed a Dockerized document classifier using YOLOv8 to identify ID cards, invoices, bank statements and other document types with high accuracy.
- Optimized inference pipeline for offline, privacy-preserving environments — zero external API calls; all processing runs locally via OpenCV and PyTorch.
- Wrapped the model in a production-ready FastAPI service, enabling seamless integration into document management workflows.

Python · FastAPI · YOLOv8 · PyTorch · OpenCV · Docker

<https://github.com/Mouhib912/document-classification> 


2025/12

### ERP AI Conversational Assistant

LLM · NLP · Full-Stack AI

- Architected an intelligent chatbot that interfaces directly with an ERP system, enabling natural-language queries for data retrieval, task automation, and decision support.
- Leveraged LangChain to orchestrate LLM reasoning, tool calls, and memory management for coherent multi-turn conversations.
- Built a responsive React frontend connected to a FastAPI backend, delivering a fluid user experience for non-technical ERP users.

Python · LangChain · LLM · FastAPI · React


<https://github.com/Mouhib912/chat-erp-ai> 

2026/03

### Fraud Risk Assessment API

Machine Learning · Risk Modeling · API

- Developed a production-grade REST API for real-time fraud risk scoring, integrating trained ML classification models (Scikit-learn) with anomaly detection logic.
- Engineered features from transactional data using Pandas; evaluated models with precision/recall tradeoffs tuned for high-stakes fraud detection context.
- Designed for plug-and-play integration into existing financial systems with documented Swagger endpoints.

Python · FastAPI · Scikit-learn · Pandas · Machine Learning <https://github.com/Mouhib912/risk-api> 

## Education

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2020 – 2025  
Tunisia

**Network and IT Engineering Student**  
INSAT

2016 – 2020  
Tunisia

**baccalaureat**  
Technical High School of Farhat Hached Rades

## Languages

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**Arabic**  
Native

**English**  
Fluent

**French**  
Fluent