

Tasnim Mtir

📍 Monastir, Tunisie 📞 +216 21 985 584 ✉️ tasnimmtir586@gmail.com
🌐 [linkedin](#) 🐙 [github](#) 🌐 [portfolio](#) 🏆 [credly](#)

Profile

AI Engineer specializing in Agentic AI systems and RAG architectures. IBM-certified expert in multi-agent systems, vector databases, and complex reasoning workflows. Award-winning hackathon participant with production experience in IBM watsonx Orchestrate, computer vision, and end-to-end ML deployment. Seeking 6-month AI engineering internship to develop scalable enterprise AI solutions.

Education

Private Higher School of Engineering - ESPRIT *Monastir, Tunisia*
Engineering Degree in Artificial Intelligence and Data Science *2023 – Present*

Mahdia Higher Institute of Computer Science *Mahdia, Tunisia*
Bachelor's Degree in Computer Systems Engineering *Graduated: 2023*

Technical Skills

Machine Learning Algorithms

Transformers (BERT, GPT), CNNs (ResNet50), Gradient Boosting
Embeddings, Tokenizers, SVMs, Random Forests, Clustering

LLM & Agentic AI Technologies

RAG Systems, Vector DBs (FAISS, Chroma), LLM Orchestration
Multi-agent Architectures (CrewAI, AutoGen), Prompt Engineering

Computer Vision & Data Engineering

YOLOv8-n, DeepSORT, OpenCV, Image Processing
PySpark, ETL Workflows, Data Pipelines, Feature Engineering

AI/ML Frameworks & Tools

PyTorch, TensorFlow, Keras, Scikit-learn

LangChain, LangGraph, Hugging Face, MLflow

Cloud & MLOps

Docker, CI/CD, Git, Vercel, IBM Cloud, AWS EC2

Model Registry, Monitoring, Logging, REST APIs

Full-Stack Development

Node.js, Angular, Flutter, FastAPI, Express.js
PostgreSQL, MongoDB, MySQL, Firebase

Professional Experience

Pura Solutions *Novation city Sousse, Tunisia*
AI Intern Jun 2024 – Aug 2024

- Developed medical document analysis platform using Python/Flask with BERT embeddings, reducing manual processing by 40% with 90% classification accuracy
- Optimized database queries and implemented vector similarity search reducing response time from 2.1s to 0.8s, serving 50+ daily users
- Built ETL pipelines for data preprocessing and feature engineering on medical documents

Mydev *Monastir, Tunisia*
Full-Stack Development Intern Feb 2023 – May 2023

- Built driving school management system for 200+ users with real-time chat module using Angular/Node.js and WebSocket
- Improved UI/UX flows implementing efficient algorithms reducing average task completion time by 30% (3.2 to 2.2 minutes)
- Designed RESTful APIs with token-based authentication and rate limiting

Projects & Hackathon

ATHENA – AI Educational Platform

FastAPI, React, MongoDB, LangChain, GPU

[Backend](#) [Frontend](#)

- Built full-stack platform with RAG-powered AI assistant using TinyLlama LLM and FAISS vector search
- Developed quiz system and a skill-based matching for virtual coworking spaces
- Engineered JWT authentication with role-based access control for students/teachers

AdminDoc-X

Python, PyTorch, LayoutLMv3, Flask, OCR

[Backend](#) [Frontend](#)

- Engineered document processing system with 94% accuracy using fine-tuned LayoutLMv3 (96% model confidence)
- Built REST API for automated extraction of registration numbers, dates, authors from administrative documents
- Reduced manual document processing time by 70% through OCR + transformer-based NER pipeline

Qubit-Forge-Quest – A Decentralized Compute Economy

Qubic, React, Node.js, MongoDB, Blockchain

[Backend](#) [Frontend](#)

- Blockchain-based decentralized compute marketplace for Qubic ecosystem
- Tokenized economy simulation with automatic processor and secure authentication

DailyOps – Agentic AI Operations System

IBM watsonx, LLaMA-3-90B, LangChain, Vercel

IBM Hackathon [Repo](#)

- Built autonomous agentic system with complex reasoning workflows reducing manual work by 60% (92% accuracy)
- Implemented multi-step tool calling (GetEmails/GetMeetings/GetTasks) and deployed on Vercel with voice mode

Vision X – Computer Vision Analytics Platform

YOLOv8-n, DeepSORT, OpenCV, Telegram API

1st Place 2025 [Repo](#)

- Developed real-time tracking system with 85% waiting time accuracy, reducing queue congestion by 30%
- Processed ANAVID dataset with custom state machine logic and automated Telegram alerts (15s response)

Lung Cancer Prediction API – Production ML System

FastAPI, MLflow, Gradient Boosting, Docker

Healthcare AI [Repo](#)

- Built automated ML pipeline achieving 93.75% prediction accuracy with MLflow experiment tracking
- Designed Makefile automation and Docker containers for reproducible deployment

Certifications & Achievements

- **IBM AI Engineering Professional Certificate** – IBM Skills Network (2025) [IBM AI Engineering](#)
– Machine Learning, Deep Learning, Neural Networks, Pre-trained Models, Custom Model Development
- **IBM RAG and Agentic AI Professional Certificate** – IBM Skills Network (2025) [IBM RAG and Agentic AI](#)
– Advanced RAG, Vector Databases, LangChain, LangGraph, CrewAI, AutoGen
- **Agentic AI Hackathon with IBM watsonx Orchestrate** – lablab.ai & IBM (2025) [Agentic AI Hackathon](#)
– Built DailyOps AI agent using IBM watsonx Orchestrate platform
- **1st Place – Camera AI Hackathon 2025** – Computer Vision Competition [Camera AI Hackathon](#)
- **Generative AI with Diffusion Models** – NVIDIA (2024) [Generative AI](#)
- **Applications of AI for Predictive Maintenance** – NVIDIA (2025) [AI for Predictive Maintenance](#)
- **Credit Risk Modeling in Python** – 365 Data Science 2025) [Credit Risk Modeling in Python](#)

Languages

Arabic (Native) — French (Fluent) — English (Fluent)