






Chaima Attafi

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
PROFILE

AI Engineer specializing in Agentic AI and innovative technologies, with hands-on experience in **LLMs**, **NLP pipelines**, and **AI agent architectures**. Passionate about applying responsible AI practices to foster ethical, collaborative and research and driven solutions.

PROFESSIONAL EXPERIENCE

TALAN , Junior AI Consulting	October 2025 – Present
Implementation of an intelligent code modernization framework automating the migration of legacy COBOL systems, with integrated code understanding, visualization, and knowledge graph reasoning and reducing manual migration.	
<ul style="list-style-type: none">- Business logic extraction and Knowledge Graph Visualization: parser to decompose COBOL code into logical sections and designed an interactive system specification and dependency knowledge graph. Enabled engineers to explore code relationships, inter-module dependencies, and business logic flow.- GraphRAG Chat Assistant: Integrated a GraphRAG-based conversational agent allowing users to query the knowledge graph in natural language and retrieve insights about the COBOL system's structure and migration status.- Multi-Agent Migration Pipeline: Migrate CBP, CPY, JCL and BMS to a modern full-stack system using Spring Boot and Angular. Built an AI multi-agent pipeline to analyze dependencies, convert business logic and scaffold projects.- Technologies: Semantic Kernel, Neo4j, React, FastAPI, JSON Schema, GraphRAG, Python, Java, Atomic Agent	
TALAN , End of study internship	February 2025
AI-Powered Educational Assistant for Enhancing Academic Collaboration	
<ul style="list-style-type: none">- Science Watch Agent: Monitors new scientific articles, udelivering trustworthy academic content in real-time.- Chat with AI Agent (RAG-based): Supports article summarization, Q&A, and fact-checking with DOI verification for ethically sourced answers.- AI Writer Agent: Assists in developing research articles. Offers custom bibliographies, citation, fact-checking, and LaTeX export for publication.- Presentation Generator Agent: Will create slide presentations from academic articles to facilitate knowledge sharing.- Technologies : AgenticRAG, Crawl4ai, CrewAI, Langchain, LangGraph, React, FastAPI, MuRAG	
TALAN , AI Internship	July 2024
MIRROR OF LIFE - Recipient of the Audience Award	
<ul style="list-style-type: none">- Boosted CRISPR off-target prediction accuracy to 88% using AI models, reducing unintended alterations.- Reduced off-target rates by 30% via ML Algorithms, Decision Trees, and Random Forests.- Improved data collection efficiency by 40% with BLAST automation and web scraping.- Technologies used : Multimodal RAG Technology: The deployment of Multimodal RAG techniques allows better analysis of complex datasets.	


PROJECTS

CO&CO-ESPRIT 	May 2024
Development of a carpooling and roommate application for students, featuring key functionalities:	
<ul style="list-style-type: none">- Implemented an NLP-based chatbot using Transfer Learning to enhance user interaction and improve response accuracy.- Ensured secure image uploads by detecting inappropriate content through text extraction with easyOCR.- Developed real-time messaging functionality using WebSockets to enable instant user communication.	
CO2 emission calculator 	March 2024
<ul style="list-style-type: none">- Developed a machine learning-based tool to estimate CO2 emissions of cars using real-world vehicle data from Canada.- Implemented predictive models to help users assess environmental impact and make eco-friendly transportation choices.- Tools and technologies: Streamlit, Pandas, Scikit-learn, and Matplotlib.	

SKILLS

Technical skills (Backend) : Python, C, FastAPI, Flask, Java, Spring Boot | **Frontend**: React.js, Angular, Symfony, TypeScript | **Tools**: , Docker, Git, MySQL, NoSQL | **Core Concepts**: NLP, GenAI, AgenticRAG, LLM, AI Agent Architectures, Crewai, Selenium, crawl4Ai, MCP, RAG)
Soft skills (Good debugger | Problem solving | Ethical Engineering | Prompt engineering Communication | Teamwork | Leadership)




EDUCATION

Private School of Engineering and Technologies , BSc. in Engineering in Computer Science	2022 – 2025
Research Thesis : AI-Powered Educational Assistant for Enhancing Academic Collaboration by Imen Ayari	
Higher Institute of Environmental Technologies, Urban Planning, and Building , BSc. Urban Planning and Development	2019 – 2022
Research Thesis : Application on the new approach of the ARRU in terms of social housing supervised by Wadie Othmani 	



LANGUAGES

Arabic — Native | **French** — Full professional proficiency | **English** — Full professional proficiency

CERTIFICATES

- Applications of AI for Predictive Maintenance program with Nvidia 	- Fundamentals of Deep Learning program with Nvidia 	- Natural Language Processing (NLP) certification program with Nvidia 
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LEADERSHIP & ACTIVITIES

Contributed a case study to the UNIMED Occasional Paper , on Responsible AI (2025) titled “Responsible AI for Enhancing Digital Cooperation in the Mediterranean Higher Education”, published on Zenodo 	2025
AI for Predictive Maintenance Training , First Place in AI for Predictive Maintenance Training program with NVIDIA & ESPRIT 	August 2024