# Abdessamad HADER

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Passionate AI enthusiast with a strong focus on leveraging Large Language Models (LLM), Natural Language Processing (NLP), and Reinforcement Learning (RL) to drive innovation and solve complex problems.

#### **EDUCATION**

**Ecole National des Arts et Metiers:** 

May 2024

Engineering degree: "Industrial Engineering Artificial Intelligence and Data Science" CPGE AL KHANSAA:

Meknes, Morocco

Aug 2022

MPSI/MP preparatory classes in advanced mathematics and physics

Casablanca, Morocco

CADI AŶAD School:

June 2019

High school degree in mathematical sciences

Casablanca, Morocco

#### Certificates \_

Coursera: Genrative AI with Large Language Models 2024 Coursera: Neural Networks and Deep Learning By DeepLearning. AI 2024 Coursera: Natural Language Processing specialisation By DeepLearning.AI 2024 EXPERIENCE.

### **Internship, Alexsys Solutions** AI and Data Science | On site (Casablanca, Morocco)

July 2023 - Aug 2023

- Creating a deep learning model for marketing campaigns.
- Developing a user interface using Flask for the new model's inferences.

**Internship, Group Renault (SOMACA)** IT solution for the maintenance group | On site (Casablanca, Morocco)

July 2022 - Aug 2022

- Creation of a database to store the various maintenance tools available in the company's inventory.".
- Adding a user interface to visualize and modify the data base.

### PROJECTS\_

# Academical Project: Prompt Engineering with Chain and Tree of thoughts | AI & Data Science

2023

- Tested prompt engineering using Chain of Thought (CoT) and Tree of Thought (ToT) methodologies for a large language model (LLM).
- Fine tuned the LLM on the same technique to enhance its reasoning.
- Comparing the two techniques in UI using streamlit framework.

## Hackathon Project: Watiqaty — LangGraph Chatbot using RAG and Tavily Search Engine | AI & Data Science

2024

- Developed at the ThinkAI hackathon in Bengrir, Morocco.
- Implemented a LangGraph chatbot named Watiqaty, integrating Retrieval-Augmented Generation (RAG) for dynamic knowledge retrieval.
- Incorporated Tavily, a custom search engine, to enhance the bot's ability to fetch and utilize external data effectively.
- Focused on improving user interaction and response accuracy for complex queries in the AI domain.

### Academical Project: ChatGiiads — Open Source LLM for Industrial Applications | AI & Data Science

2024

- Developed a sustainable, open-source LLM tailored for industrial applications, focusing on integration ease and workflow efficiency.
- Enhanced decision-making and operational efficiency through AI, incorporating extensive research and customized model training.
- Utilized Retrieval-Augmented Generation (RAG) to dynamically integrate external knowledge, improving response accuracy and relevance.
- Documented the development process comprehensively and provided usage guidelines on Read the Docs for industry professionals.

### SKILLS \_

Languages Python, C, C#, Java, LaTeX,

Linux, Tensorflow, Pytorch, Docker, OpenCV Software

Machine learning, Deep learning, Industry 4.0, Prompt Engineering, Lab Factory, Data science, Data Analytics, Academic

Lean Six Sigma.

Time Management, Problem-solving, Documentation, Engaging Presentation, Leadership, On-site coordination. Soft Skills

RAG, ReadTheDocs, Documentation, GAN's, Langchain, Ollama. Frameworks

### Languages

- **English**: fluent - **French**: fluent - **Arabic**: Native

#### Interests

Gadz'IT Club member Organization and participation to programming competition. Space Club member Organizating events.