Idriss Khattabi

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About me

AI & Data Science Master's graduate with a strong foundation in Python, Machine & Deep Learning, NLP, Predictive Modeling, and Chatbot Development. Passionate about generative AI, AI Agents & Automation, AI-driven and data science projects. Hands-on experience in Django development and a proven ability to work collaboratively, solve problems, and learn quickly.

Education

M.S.T in Artificial Intelligence and Data Science   Oct 2023 – July 2025
Faculty of Sciences and Technologies   Tangier, Morocco

BS in Computer Science and Mathematics   Oct 2019 – July 2023
Faculty multidisciplinary   Larache, Morocco

Experience

AI Engineer Intern, TNA Consulting – Casablanca   Feb 2025 – June 2025

- Designed and developed a full-stack AI SaaS platform to support financial institutions in interpreting and leveraging official central bank publications across Africa.
- Built an intelligent **chatbot** capable of answering user questions on African Central Bank documents.
- Engineered an automated and scalable **Data pipeline** for crawling, scraping, cleaning, transforming, and loading financial documents into a Vector database.
- Used Tools : **Python, Marker, Streamlit, Apach Airflow, ETL Pipeline, Flask, Ollama, Faiss, RAG, LLM**

Researcher Intern, Faculty of Poly-disciplinary – Larache   March 2023 – June 2023

- Designed and implemented an optimization system to improve the consistency of pairwise comparison matrices in the **AHP**, leveraging **GA** and **PSO**, with Developing a Django web application that makes it easier to generate AHP matrices.
- Co-authored **three** research papers with **Dr. Chakir Tajani**, papers examples :
  - A Metaheuristic Approach to Improve Consistency of the Pairwise Matrix in AHP
  - Generating a Set of Consistent Pairwise Comparison Test Matrices in AHP using PSO

Soft Skills

Analytical thinking and problem-solving – Fast learning – Teamwork and collaboration – Agility and Adaptability – Effective communication – Curious for new technologies

Technical Skills

- **Programming Languages:** Python, Java, JavaScript, SQL, C, Solidity, Bash, LaTeX
- **Machine Learning & Deep Learning:** Scikit-learn, TensorFlow, Keras, PyTorch, XGBoost, MLFlow
- **Natural Language Processing (NLP):** NLTK, spaCy, Hugging Face Transformers, GloVe, BERT, TesseractOCR
- **Generative AI & LLMs:** RAG , Prompt Engineering, Fine-Tuning (LoRA, QLoRA), LangChain, LangGraph, LlamaIndex, OpenAI, Ollama, Hugging Face, n8n
- **Web Development:** HTML, CSS, Tailwind CSS, JavaScript, React/Next JS, Django, Flask, FastAPI, Streamlit.
- **Libraries & Tools:** NumPy, Pandas, Matplotlib, Seaborn, OpenCV, BeautifulSoup, Selenium, PyTest.
- **Big Data & Distributed Systems:** Apache Spark (PySpark), Apache Kafka, Apache Hadoop, Apache Airflow
- **Databases:** MySQL, SQL Server, PostgreSQL, MongoDB, Supabase, IPFS, Vector Databases (FAISS, Chroma, Qdrant, Milvus, Weaviate).
- **DevOps & Workflow Tools:** Linux, Git/GitHub, Microsoft Azure, Docker, ETL Processes, Power BI, Tableau, RESTful API, Postman, Node-RED

Languages

Arabic: Native proficiency | **English:** Professional (B2) | **French:** Professional (B2)

Certifications

Associate Data Scientist in Python – DataCamp   **Associate Data Engineer –** DataCamp
Associate AI Engineer for Data Scientists – DataCamp   **Data Analyst –** DataCamp
Microsoft Azure Fundamentals (AZ-900) – DataCamp

Projects

ChatPDF – Chat with PDF Locally   [GitHub Repo]

- A local RAG web app to query PDF documents using LLMs, with support for PDF-to-Markdown conversion, vector search, and chatbot-style Q&A.
- Tools Used: Python, Streamlit, LangChain, Ollama, Sambanova, ChromaDB, Marker

AI Scraper   [GitHub Repo]

- An interactive tool to scrape, process, and structure web data using local or cloud-based LLMs.
- Tools Used: Python, Selenium, Crawl4AI, Streamlit, Ollama, Sambanova, Pandas

Moroccan Meal Recipes Chatbot   [GitHub Repo]

- An AI chatbot that uses RAG to deliver authentic Moroccan recipes with ingredients, steps, and optional images, supporting both local and cloud LLMs.
- Tools Used: Python, Streamlit, LangChain, Ollama, Sambanova, Faiss DB

Real-time Twitter Sentiment Analysis   [GitHub Repo]

- Created a real-time system to predict sentiment from Twitter (X) posts.
- Tools Used: PySpark, Kafka, Docker, Django, MongoDB, ChartJS

Obstacle Detection & Alert System for the Visually Impaired   [GitHub Repo]

- A real-time obstacle detection and audio alert system designed to assist visually impaired individuals using deep learning and automation tools.
- Tools Used: Python, Flask, PyTorch, MobileNetV2, CNN, OpenCV, Node-RED, FFmpeg

Data Analysis & Machine Learning Desktop Application   [GitHub Repo]

- A Python desktop app built with CustomTkinter that enables users to analyze qualitative and quantitative datasets and apply multiple machine learning algorithms through an intuitive GUI.
- Tools Used: Python, CustomTkinter, Scikit-learn, Pandas, Matplotlib

Age, Gender & Emotion Detection using CNN   [GitHub Repo]

- Detecting person Age, Gender, and Emotional state from facial images using CNN.
- Tools Used: Python, OpenCV, Tkinter, TensorFlow/Keras, CNN, NumPy, Pretrained Models

YouTube Transcript Summarizer Bot   [GitHub Repo]

- An AI-powered automation workflow that extracts transcripts from YouTube videos sent via a Telegram bot as .txt file with its summarize.
- Tools Used: n8n, Telegram Bot API, RapidAPI, JavaScript, Google Gemini

Medical Document Management Blockchain System   [GitHub Repo]

- A decentralized solution for secure medical document storage and access using Ethereum and IPFS. Empowers patients with document control, ensures transparency, and supports multi-platform access for doctors and admins. (Web & Desktop App)
- Tools Used: Solidity, Ethereum, IPFS, ReactJS, Python, Tkinter, Hardhat, MetaMask, Docker

Web Development with Django

- Marketplace Website - Chat With LLM - Blog Website - Note App - Room Chat App - E-commerce App