HAMZA HAFDAOUI

Data Scientist & AI Engineer

Master's Student in Artificial Intelligence and Data Science at FSTT.
Currently seeking a final-year internship to further develop my skills in Artificial Intelligence and Data Science.

Contact Information

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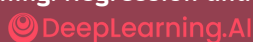
COMPÉTENCES

- **AI/ML Frameworks:** LangChain, scikit-learn, TensorFlow, PyTorch, Hugging Face, PySpark
- **Cloud Computing:** Azure Cloud
- **NLP, Computer Vision, LLMs**
- **Deep Learning:** CNN, RNN, LSTM
- **Big Data Tools:** Spark, Kafka, HBase, Hadoop (Cloudera), Hive, Sqoop
- **Databases:** NoSQL, MySQL, TSQL, MongoDB
- **Web Scraping:** Scrapy Spider, BeautifulSoup, Selenium
- **Development Environment:** Git(GitHub), Docker
- **IoT:** Arduino, Raspberry Pi, Mosquitto
- **Network Simulation:** Packet Tracer
- **Flow-Based Programming:** Node-RED
- **Programming Languages:** Java, Python, C++, Scala
- **Leadership & Team Management**

CERTIFICATES

Supervised Machine Learning: Regression and Classification DeepLearning.AI

Neural Networks and Deep Learning DeepLearning.AI

LANGUES

- Arabic: Native Language
- English: Professional Proficiency
- French: Intermediate Proficiency

AREAS OF INTEREST

- Following Technological Trends
- Swimming
- Traveling
- Chess

EDUCATION

Master's Degree in Artificial Intelligence and Data Science
Faculty of Sciences and Techniques - Tangier, Morocco (2023-2025)

Bachelor's Degree in Computer Engineering
Faculty of Sciences and Techniques - Tangier, Morocco (2022-2023)

DEUST in Mathematics, Informatics, Physics, and Chemistry (MIPC)
Faculty of Sciences and Techniques - Tangier, Morocco (2019-2022)

EXPERIENCE

Intern Financial Generative AI Team Lead - ALEXSYS SOLUTIONS   07/2024 - 10/2024

As the Team Lead for the project "Development of an AI Assistant for Quantitative Finance for Moroccan Traders," I led a development team using Agile methodologies.
- Supervised and trained interns in Generative AI, ensuring their skill development and growth.
- Managed the project in close collaboration with the Tech Lead to ensure alignment with objectives and project success.
- Fine-tuned the LLaMA 3.1 model from Hugging Face using data extracted from the Casablanca Stock Exchange website.
- Integrated the model into a RAG (Retrieval-Augmented Generation) system for contextual response generation.
- Implemented LLMOps practices, including continuous model monitoring, deployment management on Azure Cloud, and scalability optimization.

Computer Scientist - GM SOLUTION   06/2023 - 11/2023
- Utilized Scrapy and Selenium to automatically extract data from websites.
- Collaborated on projects involving APIs.
- Monitored and followed up on project development.
- Resolved issues in the application's code.

Final Year Internship - ISPITS TANGER   04 /2023 - 06/2023
- Designed and developed a full-stack web platform for ISPITS Tanger.
- Collaborated with a team on the site's design and construction.
- Configured LAMP and WAMP stacks, integrated the database

ACADEMIC PROJECTS

End-to-End Development of an Advanced Chatbot for the Faculty
- **Objective** : Develop an intelligent chatbot using RAG technologies, LangChain, and Vector Databases, tailored to a specific corpus.
- **Tools Used** : WebScraping with Scrapy Spider, LLMs, Arabic NLP, MongoDB, NLP Techniques, ChromaDB, Mistral Model (fine-tuning), LangChain, FastAPI, React.js, Docker.
- **Skills Acquired** : Natural Language Processing (NLP), API Development, User Interface Creation.

Development of a Data Analysis Application with Machine Learning
- **Objective** : Develop an interactive web application that allows users to upload data, select ML algorithms, and visualize results, offering functionality similar to IBM's SPSS.
- **Tools Used** : Python, Streamlit, scikit-learn.
- **Skills Acquired** : User Interface Development, Data Manipulation, Implementation of ML Algorithms.

Real-Time Predictive Sentiment Analysis on Twitter Data Streams
- **Objective** : Develop an application to implement a real-time sentiment analysis pipeline for Twitter data streams.
- **Key Components** :
  - Twitter data streaming with Apache Kafka, preprocessing with Pyspark and NLTK.
  - Training machine learning models (Logistic Regression, XGBoost) and storing results in MongoDB with visualization via a Flask/Django web application.

Prediction of River Drying in Morocco Project
- **Objective** : Use deep learning with an LSTM model to predict which rivers in Morocco are likely to dry up in the future.
- **Tools Used** : XGBoost, LSTM, PowerBI, Streamlit.
- **Skills Acquired** : Time Series Data Processing, Predictive Modeling, User Interface/Dashboard Development.