Fouad AURAG

Data Scientist

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Education

Master of Science
Mohammed First University - FPN
09/2022 – 09/2024 — *Nador, Morocco*

- MSc in Data Science and Intelligent Systems

Bachelor of Science
Mohammed First University - FPN
2017 – 2022 — *Nador, Morocco*

- Mathematics and Computer Science

High School Diploma
Lycée Al Amal
2014 – 2017 — *Midar, Morocco*

- Physical Sciences

Work experience

Internship in Web Development
OMDATA Consulting
12/2021 – 08/2022 — *France*

- **Mission:** Development of a web application to be hosted on the company's website so that employees can register their monthly activities, validate them and generate invoices.
- **Tools:** Angular - Nodejs - Express - HTML - CSS - TypeScript - Bootstrap
- [Certificate] & [Recommendation Letter]

Academic projects

Fine-tuning Transformers for Aspect-based Sentiment Analysis

- Master's thesis focused on fine-tuning open-source large language models for Aspect-Based Sentiment Analysis. Developed and evaluated multiple LLMs, achieving state-of-the-art performance. The top-performing models were deployed in a web application we named "Aspectify" for public use.
- **Tools: Unsloth.ai, Transformers, PyTorch, Pandas, Sklearn, HF Model Hub, Angular, Flask, Firebase.**
- [Link to the Project]

Credit Card Fraud Detection For Classifying Legitimate and Fraudulent Transactions

- This project aims to develop a model capable of predicting normal and fraudulent transactions. I trained and selected the best model, which I deployed in a web application, allowing us to use, explain and interpret the model.
- **Tools: Pycaret, catboost, xgboost, lightgbm, pandas, numpy, matplotlib, seaborn, sklearn, imblearn, shap, Angular, flask.**
- [Link to the Project]

Skills

Transformers · NLP · Machine Learning · Data Preparation · Deep Learning · Data Security · Data Mining · Model Interpretability · Web Development

Technical skills

Programming languages

- Python, C, C++, Java, php, HTML/CSS/JS , XML, SQL avancé

Python libraries

- Transformers, Pandas, Pytorch, NeatText Numpy, Seaborn, Matplotlib, Plotly, Sklearn, imblearn, PyCaret, Keras, BeautifulSoup, shap, PyQt, Joblib, Pickel, NetworkX, WordCloud

FrameWorks/Technologies

- Unsloth.ai, Spring MVC, JSP, Hibernate, LARAVEL , ANGULAR, Angular Material, Bootstrap, Moment JS , Node JS, Docker

Databases/servers

- MongoDB, Oracle, MySQL, Access, SQL Server, Tomcat

BigData

- Hadoop, Spark, Hortonworks Sandbox HDP 3.0

Academic projects

Intrusion detection systems based on machine learning models

- This project aimed to develop an intrusion detection system capable of surpassing the limits of classic IDS. Using artificial intelligence techniques.
- **Tools: Sklearn, Tensorflow, Numpy, Pandas, Matplotlib, Seaborn.**
- [Link to the Project]

Analyzing Instagram Threads with Hadoop for Optimizing User Experience

- This project aimed to optimize user experience in mobile applications by analyzing user reviews on Instagram Threads, using tools such as HDFS, Apache Spark, and Zeppelin.
- **Tools: Hortonworks Sandbox HDP 3.0, HDFS, Spark, Zeppelin, Ambari, pandas, wordcloud, seaborn, matplotlib.**

Multi-Source ETL Integration: On-Premise and Cloud

- I managed an ETL project involving extracting data from various sources(SQL Server, Excel, and CSV files), applying necessary transformations, and then loading it into a Data Warehouse. I replicated this process in both on-premise and Azure cloud environments using SSIS and Java programming with multithreading.
- Tools: SSIS, Azure SQL Database, Azure Data Factory, SQL Server, Java, Vaadin.
- [Link to the Project]

Gruphoo: Cuckoo Search algorithm for Graph Path Optimization

- This project implements the Cuckoo Search Optimization Algorithm in Python to search for the optimal path within a non-oriented graph. Multithreading is incorporated to enhance efficiency. Additionally, a user-friendly web application is developed using Angular and Flask, then deployed on Docker.
- **Tools: Python, Networkx, Plotly, Angular, Flask, Multithreading, Docker, DockerHub.**
- [Link to the Project]

Chatbot for Real Estate Price Prediction

- The project's aim was to develop an intelligent model utilizing the various steps of the CRISP-DM process. This model was then deployed in a web application which uses a Google Dialogflow agent to ensure smooth communication and provide accurate predictions to users based on the selected model.
- **Tools: PyCaret, pandas, numpy, seaborn, pickle, Angular, Nodejs, Dialogflow, flask.**
- [Link to the Project]

Voluntary experience

Founding Member, Club of Artificial Intelligence and its application (I2A)
FPN - UMP
04/2023 *Nador*

I am a Founding Member and Vice-President of the first Club of Artificial Intelligence and its application (Club I2A) at the Multidisciplinary Faculty of Nador.

Hackathon Organizer
FPN - UMP
06/2023 *Nador*

I was a member of the organizing team for the first Hackathon at the Multidisciplinary Faculty of Nador, focusing on Artificial Intelligence.[Certificate]

Organized a workshop on artificial intelligence and scientific research.
The local scientific council
11/2023 *Driouch*

A core member of the organization team to orgnize a workshop on utilizing artificial intelligence for scientific research.[Certificate]

Technical skills

Data Warehousing

- SSIS, SSAS, SSRS, SSMS

Web development

- HTML , CSS , JAVASCRIPT , TYPESCRIPT , PHP , XML

Microsoft Office

- Word, PowerPoint, Excel, Access, Project

Languages

English **Arabic** **French**

Personality

Research Mindset

Critical Thinking

Good communication skills

Creativity

Interests

Artificial Intelligence

NLP

volunteering