# ABDELATIF MEKRI

# AI & Data Science Engineer | Intelligent Systems Engineering Graduate

Master's degree in Intelligent Systems Engineering, with a focus on developing and applying advanced machine learning models, artificial intelligence techniques, and data-driven solutions. Eager to contribute to innovative projects and continuously expand my technical knowledge.



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# **EDUCATION**

### SAAD DAHLEB, BLIDA 01

MASTER'S DEGREE IN INTELLIGENT SYSTEMS ENGINEERING – Graduated with Honors.

## SAAD DAHLEB ,BLIDA 01

BACHELOR'S DEGREE IN INFORMATION SYSTEMS AND SOFTWARE ENGINEERING

# **EXPERIENCE**

# **Data Science Immersion Program 2 Intern**

Djezzy, Huawei, and MajestEYE

- Participated in an intensive Data Science Immersion Program hosted by industry leaders, focusing on real-world applications of data science techniques and tools.
- ENGAGED IN PROJECT INVOLVING PREDICTIVE MODELING, DATA PREPROCESSING, APPLYING MACHINE LEARNING AND DATA ENGINEERING METHODS

# SKILLS

## **TECHNICAL SKILLS**

- Languages & Frameworks: Python, JavaScript, SQL, Solidity
- AI & ML: TensorFlow, PyTorch, Scikit-learn, and AI/ML models
- Reinforcement Learning: with real-system integration: DSSAT/IRRIG
- Big Data: Hadoop (multi-node setup), Spark
- Simulation & Modeling: DSSAT, APSIM (studied), Smart Contracts with Ethereum
- Tools: Kaggle, VirtualBox, VSCode, Excel, LaTeX

### **SOFT SKILLS**

- Communication: Clear and confident in written & verbal formats (EN/FR/AR), public speaking experience
- Teamwork: Comfortable in multidisciplinary environments, with experience in academic & industrial collaboration
- Autonomy & Initiative: Self-starter, independently led research and projects integration
- Problem-Solving: Able to translate complex requirements into technical solutions
- Adaptability: Quick to learn new tools, libraries, and adapt to unfamiliar domains
- Creativity: Brings innovation and user-focused design into technical development.

### PROJECTS

#### Smart Irrigation System Using DSSAT and RL

Developed an intelligent irrigation decision maker using reinforcement learning algorithms.

Integrated with the DSSAT crop simulation model to simulate real-world crop responses, optimizing water use across multi-weather scenarios.

Delivered results via a dynamic dashboard built with the MERN stack and FastAPI backend.

Tools: Python, TensorFlow, MongoDB, React.js, Node.js, FastAPI, DSSAT

#### Distributed Image Compression on Hadoop & Spark

Set up a multi-node Hadoop cluster on Ubuntu via Oracle VirtualBox to perform parallel image processing tasks.

Implemented JPEG2000 and JPEG image compression jobs on Hadoop MapReduce and Apache Spark, analyzing performance trade-offs.

Tools: Hadoop, Spark, Java, Python, OpenJPEG, HDFS, VirtualBox

#### • Predictive Modelling for Fake News Detection

Built a machine learning pipeline to detect Arabic fake news using both traditional and deep learning approaches.

 $\label{lem:condition} \mbox{Creation of dataset for the models by scrapping reliable news websites.}$ 

Preprocessed the collected data and evaluated multilingual NLP strategies.

Tools: Scikit-learn, TensorFlow, NLTK, Pandas

#### • Federated Learning for Diabetes Prediction

Implemented both horizontal and vertical federated learning setups for privacy-preserving diabetes prediction using patient data.

Built and trained models, simulating decentralized environments and ensuring secure client-server communication.

Integrated Solidity smart contracts to secure model coordination on Ethereum.

Tools: PyTorch, Solidity, Ganache, Ethereum

# LANGUAGES

- Arabic (Native)
- English (Fluent)
- French (Fluent)

# INTRESTS

- Hicking
- Travelling
- Hackathones & tech events