ABDELATIF MEKRI

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**: DQN, PPO, A2C (with real-system integration: DSSAT/IRRIG)
- **Big Data**: Hadoop (multi-node setup), Spark, Google Colab, Kaggle, GitHub Actions
- **Simulation & Modeling**: DSSAT, APSIM (studied), Smart Contracts with Ethereum
- **Tools**: Git, 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 DQN, PPO, and A2C 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.

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