

Ahmed Bendrioua

Data Science and ML Engineering

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OBJECTIF

As a final-year engineering student at a prestigious engineering school, I am currently seeking a PFE (Final Year Project) internship to apply my skills in Data Science and Machine Learning Engineering in a professional environment. Available to start in January for a 6-month duration. I am eager to contribute and further develop my expertise in Machine Learning, Deep Learning, and related fields in a dynamic setting.

SKILLS

Programming Languages: Python, R, SQL, PL/SQL, Java, C, C++

Technologies: Pandas, NumPy, Scikit-Learn, TensorFlow, Keras, PyTorch, Airflow, Docker, Git, Spark, Hadoop, SAM

Development Tools: GitLab, GitHub, Docker, CI/CD Pipelines, JIRA, Linux

Cloud Computing: AWS (EC2, S3), Google Cloud, Azure

Areas of Expertise: Machine Learning (Supervised and Unsupervised Learning, Ensemble Methods, Model Optimization), Statistical Modeling (Linear/Logistic Regression, Time Series Analysis, Bayesian Inference, Hypothesis Testing), Natural Language Processing (NLP), Computer Vision Feature Engineering, Dimensionality Reduction (PCA, LDA, t-SNE), Data Pipeline Automation, ETL Processes, Data Wrangling, Feature Selection, Descriptive and Inferential Statistics, Multivariate Statistics, Probabilistic Graphical Models, Advanced Analytics (Clustering, Decision Trees, Random Forests, Gradient Boosting)

Methodologies: Agile Methods (Scrum), DevOps, Continuous Integration and Deployment (CI/CD)

EXPERIENCE

PCS Agri

Data Science and Machine Learning Engineering Intern

Rabat, Morocco

Jul 2024 – Sep 2024

- Developed a real-time object detection system for tomatoes using **YOLOv8** and a simplified **CNN** for color classification with **95%** accuracy.
- Utilized the **SAM (Segment Anything Model)** to extract the object (tomato) and remove the background, thereby facilitating precise color extraction and classification of tomatoes based on their maturity.
- Integrated **OpenCV** to handle video streams, enabling accurate assessment of tomato maturity levels, providing actionable information for agriculture.

Valhko (based in the United Kingdom)

Data Science and Machine Learning Engineering Intern

Remote

May 2024 – Jun 2024

- Developed a continuous machine learning model for fake news detection, based on Natural Language Processing (**NLP**), achieving **92%** accuracy.
- Utilized **Apache Airflow** for automating model updates and continuous performance improvement in real-time.

PROJECTS

YOURKLN-8B - AI Generation Model ([View Project](#))

- Developed an AI generation model with 8 billion parameters, fine-tuned from **LLaMA-3 8B**, to provide in-depth analyses on complex AI topics, with **89%** accuracy.
- Utilized **NVIDIA A100 Tensor Core GPUs** to train the model on a diverse set of specialized AI books.

RECKLN - Movie Recommendation System ([View Project](#))

- Designed a deep content-based movie recommendation system, processing over one million movies with **TensorFlow** and **Keras**, achieving **87%** accuracy.
- If over **60%** of users rate a recommendation negatively, the system reorders movies, lowering the priority of poorly rated ones to reduce their future appearances.

TEXT2SQL - Natural Language to SQL Query Model ([View Project](#))

- Created a language model capable of transforming natural language queries into precise **SQL** instructions, with **90%** accuracy.

- Trained on a SQL dataset containing over 100,000 lines, using **TensorFlow** and **Keras**.

FraudGuard Credit - Credit Card Fraud Detection System

- Developed a fraud detection system using a **Random Forest**, achieving **94.83%** accuracy.
- Compared the performance of **Random Forest** with and without class weighting, demonstrating that both variants outperformed the **ADASYN** approach used for oversampling.

EDUCATION

National Institute of Statistics and Applied Economics (INSEA)

Engineer's Degree, Data Science

Rabat, Morocco

2023 – 2025

Ibn Zohr University, Faculty of Sciences

Bachelor's Degree in Mathematics and Computer Science, Software Engineering track, with Honors

Agadir, Morocco

2020 – 2023

Al Baqali High School

Baccalaureate in Mathematical Sciences, with Honors

Agadir, Morocco

2020

LANGUAGES

French: Professional proficiency

English: Professional proficiency

Arabic: Native language