MAI KASSEM

Junior Machine learning Engineer & Data Scientist

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Summary

Graduate Engineer with hands-on experience building **end-to-end ML systems**, from data analysis to deployment via APIs. Strong focus on **production-ready models**, reproducibility, and turning experiments into usable tools.

Education

University Of The West of England 2024

Bachelor of Science in Computer Science (Artificial Intelligence Pathway)

Skills

Programming: Python, C++, SQL.
Machine Learning: Scikit-learn, TensorFlow, Keras, Neural Networks, OpenCV, NLP, Ensemble Methods, Hyperparameter Tuning, Feature Engineering.
Data Analysis & Visualisation: Pandas, NumPy, Matplotlib, Seaborn, EDA.
Tools & Frameworks: Git, Jupyter, Flask, FastAPI, Streamlit.

Project Highlights

Engine Anomaly Detection & RUL Prediction

- Designed, trained, and deployed a GRU-based Remaining Useful Life model for engine health monitoring.
- Flagged potential engine failures **,** supporting preventative maintenance use cases.
- Packaged model behind a Flask API for local real-time inference.

Premier League Match Outcome Predictor

- Built and compared three models (DNN, SVM, Random Forest) on **1,000+ historical matches.**
- Improved prediction accuracy to **85%** through feature engineering and model selection.
- Evaluated model performance using cross-validation, precision, recall, and accuracy metrics.

• Traffic Violation Detection (In Progress)

- Developing a computer vision system to detect wrong-way driving using YOLOv8.
- Building REST APIs with Flask and FastAPI to support real-time detection pipelines.

Certifications

Generative AI Fundamentals - DataBricks
Data Science Simulation - BCG X (Forage)
Deep Learning Specialization - DeepLearning.AI (In Progress)

Languages

English ✻✻✻✻✻
Arabic ✻✻✻✻✻
French ✻✻✻✻✻

Experience

✻ AI Model Evaluation Engineer (Volunteer) - Omnichunk

December 2025 - Present

- Designed an evaluation framework to benchmark two large language models across a structured test case.
- Automated repeatable model testing using Python, reducing manual evaluation time by approximately 20 hours per week.
- Analysed model outputs and produced comparison reports to support model selection decisions.

✻ Project-based Machine Learning Internships

August 2025 - November 2025

- Delivered 10 end-to-end ML projects under time constraints, from exploratory data analysis to model evaluation, simulating real client-style delivery.
- Applied feature engineering, model training, and evaluation techniques to ensure high-quality, reliable results.

✻ Airport Hostess - Bristol Airport

June 2022 - November 2022

- Assisted 50–100 passengers daily in a fast-paced environment.
- Delivered effective customer service under time pressure, resolving queries and complaints efficiently.
- Maintained compliance with service standards while supporting operational flow and passenger satisfaction.