

# MAI KASSEM

Machine learning Engineer & Data Scientist

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Bristol, United Kingdom

## Summary

Computer Science graduate passionate about turning data into real-world solutions. I bring expertise in data analysis, visualization, and feature engineering, along with hands-on experience building and deploying ML models using TensorFlow, Keras, Scikit-learn, Flask, and Streamlit. Proficient in Python, C++, and SQL, with a strong focus on creating accurate, optimized, and impactful AI systems.

## Education

University Of The West of England 2024

Bachelor of Science in Computer Science  
Artificial Intelligence Pathway

## Skills

**Programming Languages :** C++, Python, SQL

**Machine Learning :** Scikit-learn, TensorFlow, Supervised & Unsupervised Learning, Neural Networks, OpenCV, Natural language processing (NLP), Ensemble Methods, Model Evaluation techniques, Hyperparameter Tuning, Feature Engineering

**Data Analysis & Visualization :** Pandas, NumPy, Seaborn, Matplotlib, Exploratory Data Analysis, Data cleaning & Wrangling

**Tools :** Git, Docker, Jupyter Notebooks, FastAPI, Flask, Streamlit

**Soft Skills :** Problem-Solving, Time Management & Adaptability, Self-Learning & Continuous Improvement

## Project Highlights

### Premier League Match Outcome Predictor

Predicted match outcomes using historical data with DNN, SVM, and Random Forest models. Achieved high accuracy through preprocessing, feature engineering, and model comparison.

**Tech Stack:** Python, Pandas, NumPy, Scikit-learn, Tensor- Flow, Keras

### Engine Anomaly Detection & RUL Prediction

Built GRU-based model predicting engine remaining useful life from sensor data (MAE: 17.84, R<sup>2</sup>: 0.83). Deployed via Flask for real-time input and predictions.

**Tech Stack:** Python, TensorFlow, Keras, NumPy, Scikit-learn, Flask

### Traffic Violation Detection (In Progress)

Developing YOLOv8 system to detect wrong-way driving integrating Flask/FastAPI.

**Tech Stack:** Python, OpenCV, YOLOv8, Flask, FastAPI

## Certifications

Generative AI Fundamentals

Databricks  
Oct 2024

Deep Learning Specialization

DeepLearning.AI, Coursera  
In Progress

## Experience

### \*Bristol Airport - Airport Hostess

June 2022 - October 2022

Delivered customer focused solutions in a high-traffic environment, resolving operational issues with speed and accuracy

Maintained accurate records and ensured compliance with security and operational protocols

\* Data Management, Customer Service

### \* Sparks Bristol - Production assistant

June 2025 - June 2025

Coordinated with technical teams to ensure smooth event operations and audience experience

Collected and organized survey data from event vendors to identify challenges and improvement areas.

\* Survey Data Collection & Analysis, Event Operations

### \* Elevvo - Machine Learning Engineer Intern

August 2025 - September 2025

Built and optimised complete ML pipelines, from data cleaning and feature engineering to model training and validation, to solve practical, real-world problems.

\* Machine Learning, Data Science

## Languages

English

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Arabic

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French

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