

Ali Hussein

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Data Science graduate skilled in building and deploying machine learning models, with hands-on experience in real-world data analysis and predictive modeling. Completed an internship at **ED-Data Hub** and developed projects including **Flight Delay Prediction (FastAPI deployment)** and **Bankruptcy Prediction**. Proficient in Python, SQL, and data visualization, with a strong focus on end-to-end problem solving, model deployment, and data-driven decision making. Seeking an entry-level opportunity to contribute to impactful AI and data initiatives.

Education

Lebanese University Faculty of Information II

Bachelor of Science in Data Science (2023-2025)

SKILLS

Programming Languages: Python, SQL, R, Java

Frameworks & Libraries: pandas, NumPy, scikit-learn, matplotlib, seaborn, FastAPI

Tools & Platforms: Google Colab, VS Code, GitHub, Excel

Technical Skills: Machine Learning, Model Development & Evaluation, Feature Engineering, Data Visualization, Model Deployment (FastAPI), REST APIs

Soft Skills: Problem Solving, Critical Thinking, Effective Communication

WORK EXPERIENCE

DATA ANALYST INTERN | ED-DATA HUB (October 2024 – January 2025)

- Developed and automated **data cleaning and preprocessing workflows** using Python (pandas, numpy, openpyxl) to ensure data quality and consistency.
- Conducted **exploratory data analysis** and created visualizations with matplotlib and seaborn, extracting actionable insights for strategic decision-making.
- Integrated multiple datasets and compiled structured visual reports into Excel, enhancing clarity for stakeholder presentations.

Projects

Flight Delay Prediction | Python, LightGBM, FastAPI

- Developed an **end-to-end flight delay prediction system** using LightGBM on 5.6M flight records, achieving **88% accuracy**.
- Engineered key time-based and categorical features to enhance model performance.
- Deployed the trained model as a **REST API using FastAPI**, featuring real-time predictions, input validation, and an interactive Swagger UI.
- Designed for scalability and easy containerization for future cloud deployment.

Bankruptcy Prediction through ML techniques

- Built **machine learning models** to predict corporate bankruptcy using financial ratios.
- Applied **SMOTE** to address class imbalance and performed **feature selection** to improve model robustness.
- Evaluated model performance using **precision, recall, and F1-score** under realistic imbalance conditions.