Executive Summary

This project predicts flight ticket prices using real-world aviation data. The goal was to understand how different factors—such as airline, source, destination, departure time, arrival time, duration, and stops—affect the final ticket cost.

The dataset required extensive cleaning, feature extraction, and handling of categorical variables. After preprocessing, multiple machine learning models were trained, including Linear Regression, Decision Tree, and Random Forest Regressor. Among them, the Random Forest model performed the best, capturing the complex relationships between flight features and ticket prices.

This project showcases end-to-end data preparation, exploratory analysis, feature engineering, and supervised machine learning. It reflects a practical approach to solving a real business problem in the aviation domain.
