Flights Recommendation Model

**Overview / Introduction:**

First of all, data science nowadays is becoming more important than ever. It the way to an artificial intelligence world while using machine learning techniques to automate, predict and solve problems. In this project, I will be using a recommendation algorithm that recommends solutions and improvements for companies or government sectors to support their decision-making process by discovering data patterns and analyze data to answer questions.

**Question / Need:**

The General Authority of Civil Aviation is the main controller and issuer of all flights in Saudi Arabia. The main need is to have a recommendation system that recommend which airport needs to have more flights based how many passengers and the availability of seats, which suggest more seats that can occupy more passengers that increase revenue.

**Data Description:**

Data source: an export of GACA’s database

Data size: around 100,000 rows

Data Features: 14 features

|  |  |
| --- | --- |
| Features | Description |
| ID | Unique Identifier |
| Departure Airport | The Departure Airport |
| Arrival Airport | The Arrival Airport |
| Departure Airport Country | The Departure Airport Country |
| Arrival Airport Country | The Arrival Airport Country |
| Arrival / Departure | Flight Direction |
| Flight Category | The Flight Category |
| Actual Date | The Actual Date of The Flight |
| Actual Time | The Actual Time of The Flight |
| No of Passengers | The Total Number of Passengers in The Flight |
| No of Seats | The Total Number of Seats in The Flight |
| Airline Code | The Airline that Operated The Flight |
| Type of Aircraft | The Aircraft Type used in The Flight |
| Aircraft Registration Code | The Aircraft Registration Code |

**Tools:**

Numpy: EDA

Pandas: EDA

Matplotlib: Visualization

Scikit Learn: Modeling