Exploratory Analysis of the EMIRATES AIRLINES

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Introduction:

Emirates Airlines is a global aviation leader, renowned for its exceptional services and luxurious travel experience. With its state-of-the-art fleet and extensive network of destinations, Emirates Airlines has become a preferred choice for millions of passengers around the world.

From its humble beginnings in Dubai in 1985, Emirates Airlines has grown to become one of the most successful and admired airlines in the industry. Whether you are traveling for business or pleasure, Emirates Airlines offers an unparalleled level of comfort, convenience, and hospitality that will make your journey a truly unforgettable experience.

Problem Statement:

The purpose of my assessment in this project is to answer the questions below by analyzing the different aspects of customer satisfaction in the Emirates Airlines. The important questions were:

1. Which percentage of airline passengers are satisfied? Does it vary by customer type? What about type of travel?
2. What is the customer profile for a repeating airline passenger?
3. Does flight distance affect customer preferences or flight patterns?
4. Which factors contribute to customer satisfaction the most? What about dissatisfaction?

Preparation of the Datasets:

Public datasets were downloaded at the following link provided by Maven Analytics under this license. No issues with bias and credibility were found with the data through the methodology of ROCCC.

Following are the list of files (in CSV format) and the descriptions:

Filename	Description
Airline_passenger_satisfaction.csv	Details of the customer satisfaction data

Processing of the Datasets:

The tools that I used for data processing are:

- Microsoft Excel 365

To remove any ambiguity of the fields used in the database, I created a data dictionary to make it easier for the reader to better understand it.

Field	Description
ID	Unique passenger identifier
Gender	Gender of the passenger (Female/Male)
Age	Age of the passenger
Customer Type	Type of airline customer (First-time/Returning)
Type of Travel	Purpose of the flight (Business/Personal)
Class	Travel class in the airplane for the passenger seat
Flight Distance	Flight distance in miles
Departure Delay	Flight departure delay in minutes
Arrival Delay	Flight arrival delay in minutes
Departure and Arrival Time Convenience	Satisfaction level with the convenience of the flight departure and arrival times from 1 (lowest) to 5 (highest) - 0 means "not applicable"
Ease of Online Booking	Satisfaction level with the online booking experience from 1 (lowest) to 5 (highest) - 0 means "not applicable"
Check-in Service	Satisfaction level with the check-in service from 1 (lowest) to 5 (highest) - 0 means "not applicable"
Online Boarding	Satisfaction level with the online boarding experience from 1 (lowest) to 5 (highest) - 0 means "not applicable"
Gate Location	Satisfaction level with the gate location in the airport from 1 (lowest) to 5 (highest) - 0 means "not applicable"
On-board Service	Satisfaction level with the on-boarding service in the airport from 1 (lowest) to 5 (highest) - 0 means "not applicable"
Seat Comfort	Satisfaction level with the comfort of the airplane seat from 1 (lowest) to 5 (highest) - 0 means "not applicable"
Leg Room Service	Satisfaction level with the leg room of the airplane seat from 1 (lowest) to 5 (highest) - 0 means "not applicable"
Cleanliness	Satisfaction level with the cleanliness of the airplane from 1 (lowest) to 5 (highest) - 0 means "not applicable"
Food and Drink	Satisfaction level with the food and drinks on the airplane from 1 (lowest) to 5 (highest) - 0 means "not applicable"
In-flight Service	Satisfaction level with the in-flight service from 1 (lowest) to 5 (highest) - 0 means "not applicable"
In-flight Wifi Service	Satisfaction level with the in-flight Wifi service from 1 (lowest) to 5 (highest) - 0 means "not applicable"
In-flight Entertainment	Satisfaction level with the in-flight entertainment from 1 (lowest) to 5 (highest) - 0 means "not applicable"
Baggage Handling	Satisfaction level with the baggage handling from the airline from 1 (lowest) to 5 (highest) - 0 means "not applicable"
Satisfaction	Overall satisfaction level with the airline (Satisfied/Neutral or unsatisfied)

Furthermore, after analyzing the dataset, it was found out that the **'arrival_delay'** column had blank values. So, after consulting the stakeholders, I replaced them with same values that **'departure_delay'** had to have consistency in the dataset.

Analysis of the Datasets:

Following are the queries raised by the stakeholders and the step I took for analysis and visualization of the data:

1) Which Percentage of Airline Passengers are Satisfied? Does it Vary by Customer Type? What about Type of Travel?

2)

Conclusion of the Analysis:

During this project, I analyzed the sales results of a fictious Pizza Palace company to not only extract and analyze the trends and patterns, but also suggested actions based on data for better profitability for the company.