**Power BI steps:**

1. **Adding datasets:**

Loaded CSV and excel files in Power BI

Date table:A screenshot of a computer

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Airline-passenger-satisfaction table

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1. **Relationships:**

Created relationships between Response date (airlines table) and date (date table)

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1. **Transforming data:**

The response date in the airlines table starts with January 1, 2021, till December 31, 2022.

This means that there are a total of 730 dates in this table

The date table currently, however, has 749 rows. This means that there are extra rows in the date table.

In order to keep only the dates which are used in the airlines table. We merge both the datasets on date column using inner join. This will keep only the dates which are common to both the dataset.

This is done by using Transform data feature in the Home tab.

Here, while merging, we are using a new merge feature.

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After merging,

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*(and many more columns, couldn’t fit it in one screenshot)*

1. **Measure table:**

Creating this in order to store DAX outputs.

Created an empty table with a column and a measure of that column. *(The column in hidden in the screenshot below)*

A calculator and a calculator

Description automatically generated

1. **Storytelling:**

**Understanding data: (airline passenger dataset)**

The airline passenger satisfaction dataset contains ratings given by the passengers to a particular airline based on various parameters.

The dataset contains 129,880 reviews (rows) and 32 columns.

The data can be segregated in the following umbrella terms:

* **Demographics:** (ID, age, gender, travel type, etc.)
* **Airline performance parameters** (check-in service, online booking, seat comfort, food and drink, etc.)
* **Overall rating (**Important for finding promoter/ detractor scores)

1. **Visualizations:**

Based on understanding the data, we can work on 3 main visualizations to tell our story.

1. **Demographics analysis**
2. **Net Promoter Score**
3. **Customer Experience**

Before starting with the visualization, I created a measure named response\_count which includes the the count of number of IDs in the airlines dataset. This is used in many of the visualizations going forward.

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A close up of a word

Description automatically generated

* 1. **Demographics:**

Created a dashboard analysing the visualizations related to demographics.

**Modifications:**

While visualizing count of responses based on age, the bar graph looked like this,  
A blue graph with white text

Description automatically generated

Since the age ranged from 7 years to 70+ years, the visualization is very chaotic and difficult to understand.

Hence, I made Age groups,

A screenshot of a computer

Description automatically generated

Updated visual,

A graph of blue rectangular shapes

Description automatically generated with medium confidence

Much easier to understand quickly.

Final Dashboard for Demographics looks like this,

A screenshot of a graph

Description automatically generated

* 1. **Net Promoter Score:**

Calculating the number of customers who would recommend the airlines to their friends, family, etc. (Promoters)

Also calculated the number of customers who would hurt the airlines by giving a negative recommendation to others. (Detractors)

For this visual, data is segregated into 3 main sections based on the column ‘*How likely are you to recommend us?’*

Based on the overall rating (1-10), the customers are classified as:

* Promoters (Overall rating >= 9)
* Detractors (Overall rating<=6)
* Passive (Overall rating is either 7 or 8)

Moving on, creating measures for the above criteria, using the following formulae,

Promoter Count = CALCULATE([response count], FILTER(merged\_tables, merged\_tables[How Likely Are You to Recommend Us?]>=9))

Detractor Count = CALCULATE([response count], FILTER(merged\_tables, merged\_tables[How Likely Are You to Recommend Us?]<=6))

Passive Count = CALCULATE([response count], FILTER(merged\_tables, merged\_tables[How Likely Are You to Recommend Us?] in {7,8}))

After adding these measures, we add one more measure called Net Promoter Score. The formula for this measure is as follows,

Net Promoter Score = ([% Promoters] - [% Detractors])\*100

This measure is used to find the overall Net Promoter Score (NPS).

We also add a new parameter in this visual.

This parameter contains factors that are used to evaluate customer experience with the airline.

The values on which the customer satisfaction is evaluated are:

* Age Group
* Gender
* Type of Travel
* Customer Type
* Class
* Departure Arrival Time Convenience
* Ease of Online Booking
* Check-in Service
* Gate Location
* Online Boarding
* On-Board Service
* Cleanliness
* Seat Comfort
* In-flight Wi-Fi Service
* In-flight Service
* Food and Drinks
* In-flight Entertainment
* Leg Room Space
* Baggage Handling

This Net Promoter Score Parameter is linked to a clustered bar graph. As the user clicks on each parameter, the bar graph displays NPS according to the parameter chosen for the year 2021 and 2022.

For ex,

If someone wants to evaluate the NPS for both the years based on Class, the following visual will be useful,

A graph on a computer screen

Description automatically generated

Similarly, if someone wants to evaluate the NPS based on the legroom space on the flight, following visual will be helpful,

A graph with purple and black text

Description automatically generated with medium confidence

*(If space is a problem on the dashboard, you can use the parameter as mentioned above.)*

Overall Net Performance Score dashboard looks like this,

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