Airline Booking project.

Project Overview

  This data analysis project seeks to uncover insights from the customer booking dataset which contains 50,001 columns and 14 rows. The dataset which is on a single sheet/table contains information such as number of passengers, sales channel, trip type, purchase lead, length of stay, flight hour, flight day, route, booking origin, wants extra baggage, wants preferred seat, wants inflight meals, flight duration, booking complete.

Data source

  The data was taken from Kaggle.

Tools

Excel for cleaning and preparation.

Power BI for data visualization.

Data cleaning/preparation.

 At the initial stage of preparation, I created a duplicate of the dataset, cleared all formats before inserting a column for Serial Numbers (S/N), so the dataset can possess unique values. I went further to convert flight hour and flight duration columns into a proper time format.

Images.

Exploratory Data Analysis.

The data was explored to uncover insights and answer important questions such as :

1. What is the total number of bookings attempted?
2.   How many customers completed the flight booking process?
3.   What sales channel has the highest number of bookings?
4. What are the top ten countries with the most booking attempts?
5. Which flight weekday is associated with the greatest number of bookings?
6. How many customers wants space for extra baggage?
7. How many customers wants in flight meal?
8. How many customers wants a preferred seat?

9. The trip type was used as filter button.

Images.

Results and Findings.

- There are 50,000 total bookings out of which only 7,478 were completed. 42,522 bookings were left uncompleted. 85.04% of people who booked did not complete the booking process.

- At 17,872, amongst top ten countries, Australia had the highest total number of attempted Bookings and was 1,564.06% higher than New Zealand which had the lowest number of attempted Bookings at 1,074.

- Though Australia had the highest number of attempted bookings, Malaysia had the highest number of completed bookings at 2248 out of 7174 attempted bookings. Australia had 900 number of completed bookings out 17,872 attempted bookings. An average of 1,000 customers from Malaysia completed their bookings each day of the week. Malaysia is responsible for 30.01% of completed bookings.

- 99% of completed are bookings are round trips while circle trips and one way trip share the remaining 1%.

- 44,382 people booked through the internet and 5,618 booked through mobiles. Only 6869 (15.8%) people who booked through the internet completed their bookings while 609 (10.8%) customers out of 5,618 completed their bookings through mobile.

- 33,439 (66.9%) wants extra baggage while 16561(33.1%) don't. 21,357(42.7%) customer wants inflight meals while 28,643(57.3%) don't. 14848 (29.7%)wants preferred seat, while 31,152(62.3%) don't. This means that customers care more about extra baggage than inflight meals or preferred. Extra baggage should be prioritized.

Recommendations

- Further analysis should be carried out as to why customers don't complete their booking. Does it have to do with their country location? Or it's because of the

sales channel. Probably the internet and the mobile channel isn't suiting customers.

- Attention should be paid to booking originators from Malaysia. They have the tendency to follow all through their booking process.
- Provisions should be made for the effective functionality of round trips as customers book more of this trip type.

Airline Booking Dashboard

50.00K
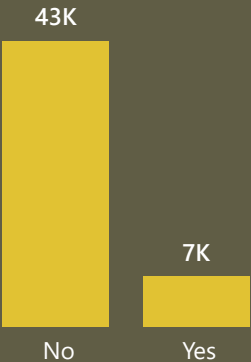**Total Num Of Bookings**

7478
Num of Completed Bookings

42.52K
Num of Incomplete Bookings

Total Booking by Booking Complete

- No: 43K
- Yes: 7K

Count of num_passengers by wants_extra_baggage

- 16.56K (33.1...)
- 33.44K (66.88%)

wants_extr...
- ● Yes
- ● No
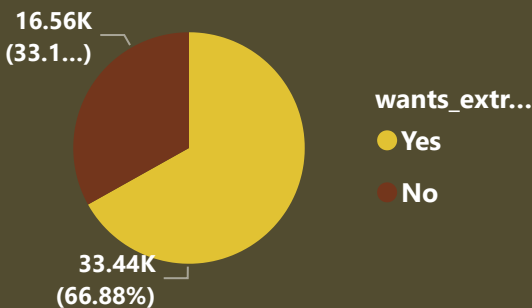
Total Number Of Bookings by Sales Channel

- Internet: 44K
- Mobile: 6K
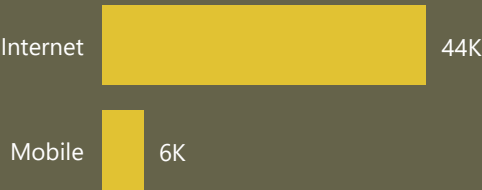
Total number of Bookings by Top ten Booking Origin

- Australia: 18K
- Malaysia: 7K
- South Korea: 5K
- Japan: 4K
- China: 3K
- Indonesia: 2K
- Taiwan: 2K
- Thailand: 2K
- India: 1K
- New Zealand: 1K
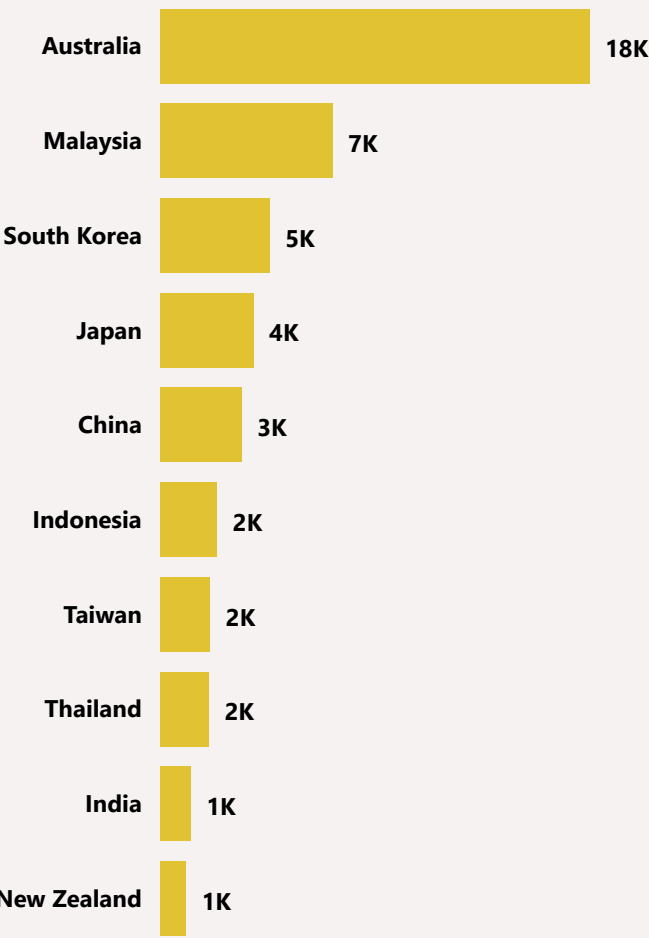
Count of num_passengers by wants_in_flight_meals

- 21.3... (42....)
- 28.64K (57.29...)

wants_in_fli...
- ● No
- ● Yes
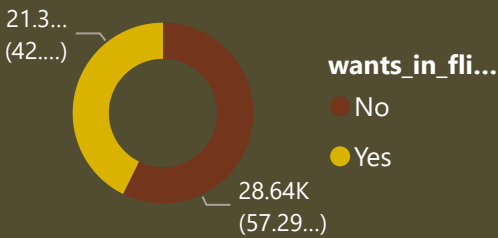
Number of Bookings by flight_day

- Mon: 8.1K
- Wed: 7.7K
- Tue: 7.7K
- Thu: 7.4K
- Fri: 6.8K
- Sun: 6.6K
- Sat: 5.8K
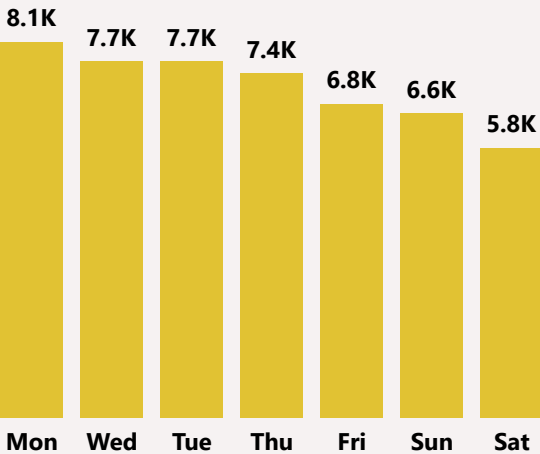
Count of num_passengers by wants_preferred_seat

- 14.85K (29.7%)
- 35.15K (70.3%)

wants_prefe...
- ● No
- ● Yes