flyingwhale.

Case Study

FlyingWhale
Airline

Submitted by:
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Objectives:

This case study aims to understand FlyingWhale airline customers' travel patterns and offer recommendations for strategies to improve customer satisfaction and boost loyalty program effectiveness.

Data Sources:

Data has been provided in the form of two CSV files.

- Customer Flight Activity.csv

- Customer Loyalty History.csv

Data Cleaning:

- Duplicates are removed from Customer Flight Activity Table.
- There are negative values in the salary column of the Customer Loyalty History table.

Tools:

Microsoft Power BI:

- Conducted in-depth data analysis using Power BI.
- Developed interactive dashboard and reports to uncover insights and trends.
- Created a new table Customer Loyalty Cancellation using DAX queries.
- Add additional column Enrollment Duration in Customer Loyalty Cancellation in Power BI.

Flight Activity Analysis
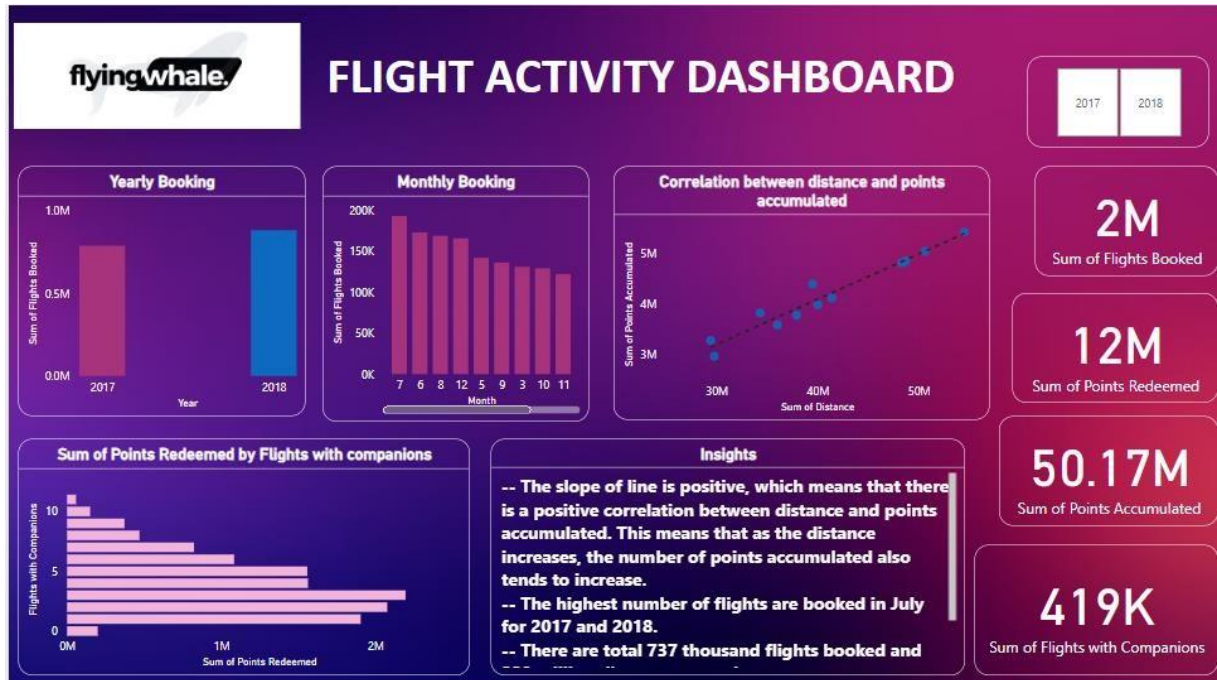
1. Flying Whale Airline has around 16.74 thousand customers.

2. Data is available for flights in 2017 and 2018.

3. Over 2 million flights were booked by customers during this time.

4. Flight bookings show a similar trend in both years.

5. In 2017, 787,410 flights were booked, accounting for 47.17% of the total.

6. In 2018, 881,754 flights were booked, making up 52.83% of the total.

7. There's a positive relationship between flight distance and points accumulated, meaning as the distance increases, so do the accumulated points.

8. Flights booked with companions show the same pattern in points redemption, with maximum points redemption observed for all flights booked with companions.

Loyalty Segmentation Analysis
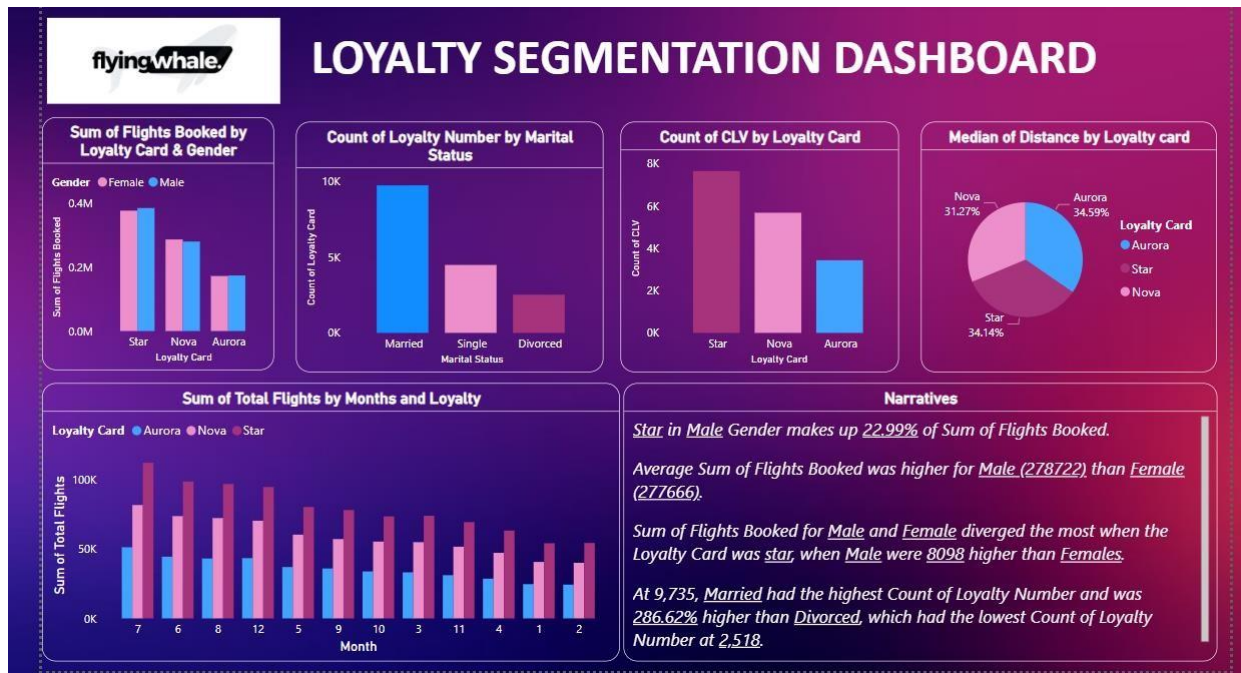
1. Star card holders book the highest number of flights while Aurora card holders book the fewest number of flights.

2. More flights are booked by male customers holding Star and Aurora cards while female customers holding Nova cards.

3. Overall, more flights are booked by male customers. However, there's no significant difference between the number of flights booked by males and females as the numbers are similar.

4. The largest loyalty segment is made up by the married customers accounting for 58.21% of Members, followed by single customers at 26.8%, and divorced customers at 14.99%.

5. Star, Nova, and Aurora card holders cover similar median distances. With Star card holders covering 632 km, Aurora card holders covering 630 km, and Nova card holders covering 600 km.

6. Aurora card holders have the highest average Customer Lifetime Value (CLV) at around $10,674, followed by Nova card holders at $8063, and Star card holders with the lowest average CLV of around $6726.

7. Across the months, the pattern of flights booked by different loyalty card holders remains consistent: Aurora card holders book the fewest flights each month, followed by Nova card holders, and Star card holders book the highest number of flights.

Enrollment and Cancellation
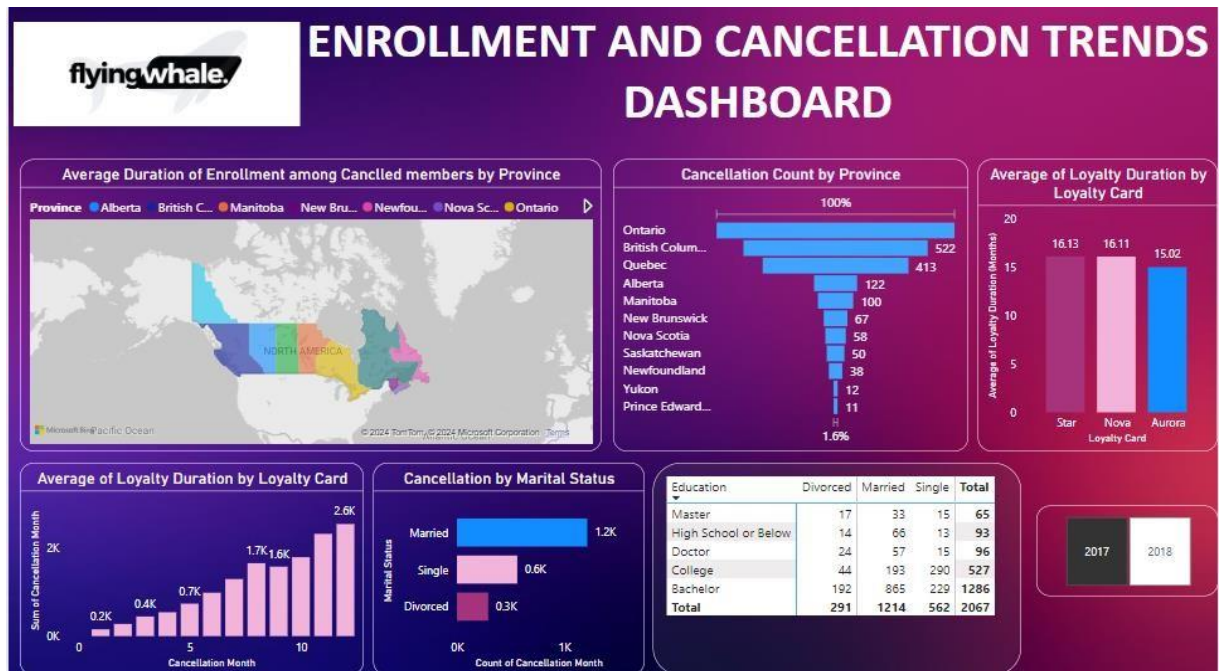
1. The average enrollment duration across all members is approximately 15.88 months.

2. New Brunswick has the highest average enrollment duration.

3. Prince Edward Island has the lowest average enrollment duration.

4. Members from Prince Edward Island cancel their enrollment the fastest, with an average duration of almost 12 months.

5. Most cancellations occur in Ontario, British Columbia, and Quebec.

6. Prince Edward Island and Yukon have the least number of cancellations.

7. The highest number of cancellations are done by married customers.

8. Customers with Bachelor's education have the highest percentage of cancellations at 62.22%, followed by those with college education at 25.5%.

9. Star and Nova card holders have similar average enrollment durations, both around 16 months. Aurora card holders have a slightly lower average enrollment duration of almost 15 months.

10. There is a consistent upward trend in the number of cancellations from 2013 to 2018.

11. The maximum number of cancellations occurred in July in 2016 and 2017. In 2018, the highest number of cancellations was observed in August.

Recommendations

Based on the analysis, here are some recommendations for the Flying Whale Airline system:

Targeted Marketing:

They should focus more on Star card holders as they book the highest number of flights. Additionally, they should offer personalized promotions to male customers holding Star and Aurora cards, and female customers holding Nova cards, as they book more flights.

Loyalty Program Optimization:

Enhance the loyalty program for Aurora card holders, as they have the highest average Customer Lifetime Value (CLV). Moreover, offer incentives for Nova card holders to upgrade to Aurora status.

Customer Segmentation:

Develop targeted marketing campaigns for married customers as they make up the largest loyalty segment. Additionally, offer special promotions for customers with Bachelor's education as they have the highest percentage of cancellations.

Regional Focus:

Increase marketing efforts in New Brunswick as it has the highest average enrollment duration. Additionally, offer regional promotions to customers from Prince Edward Island as they have the lowest average enrollment duration and cancel their enrollment the fastest.

Retention Strategies:

Implement a win-back campaign to reengage customers who have canceled their enrollment, focusing on married customers and those with Bachelor's education. Offer loyalty rewards for customers who have been enrolled for over 15 months to encourage retention.

Cancellation Trends:

Analyze and address the reasons for the consistent upward trend in cancellations from 2013 to 2018. Moreover, offer retention incentives to customers who are likely to cancel, based on their enrollment duration and loyalty status.

By implementing these recommendations, Flying Whale Airline can optimize its loyalty program, improve customer retention, and increase revenue.