

Business Intelligence Case Study: FlyingWhale Airline

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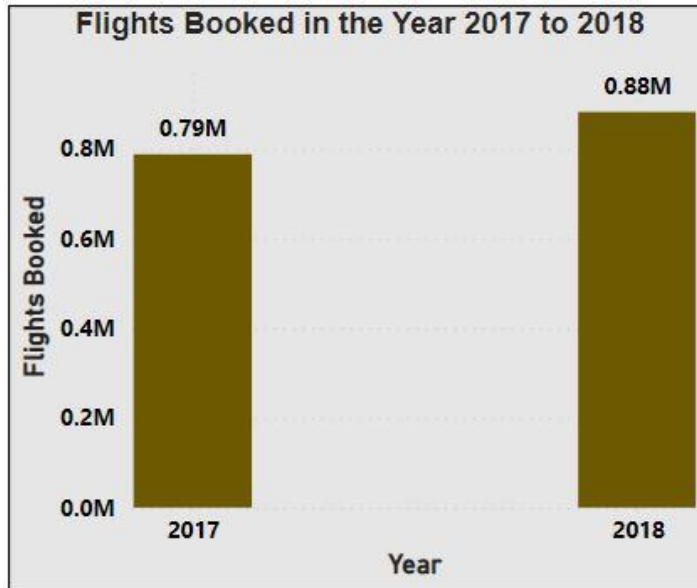
Introduction:

Flying Whale Airline, an international carrier, aims to improve its business intelligence capabilities through the analysis of Customer Flight Activity and Customer Loyalty History. The airline is dedicated to enhancing the customer experience, gaining insights into travel behaviors, and maximizing the efficiency of its loyalty programs.

Objectives:

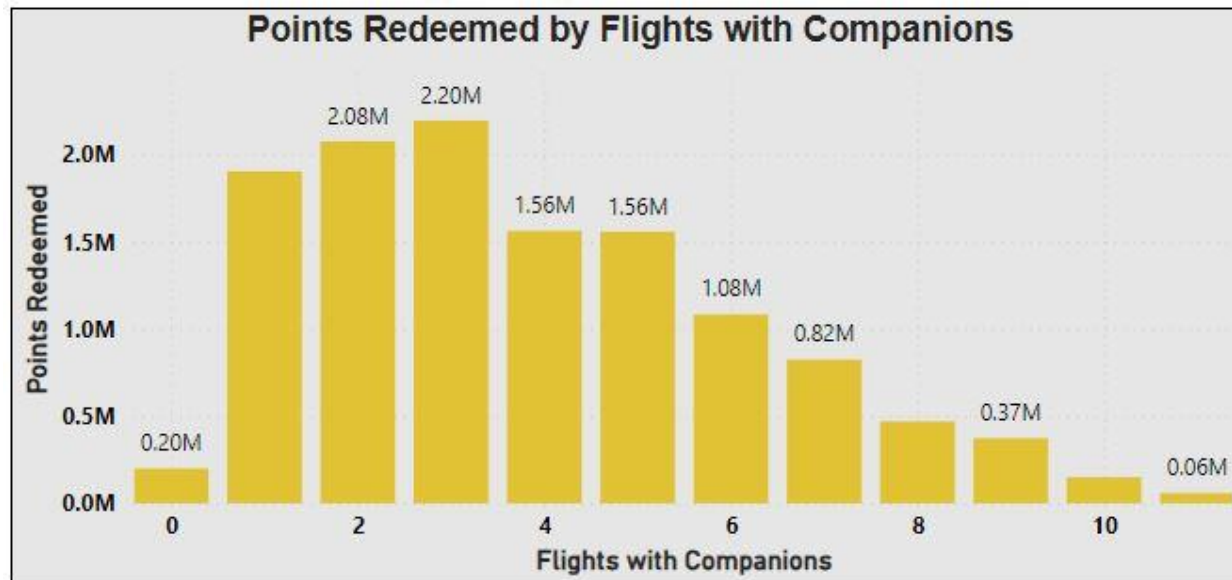
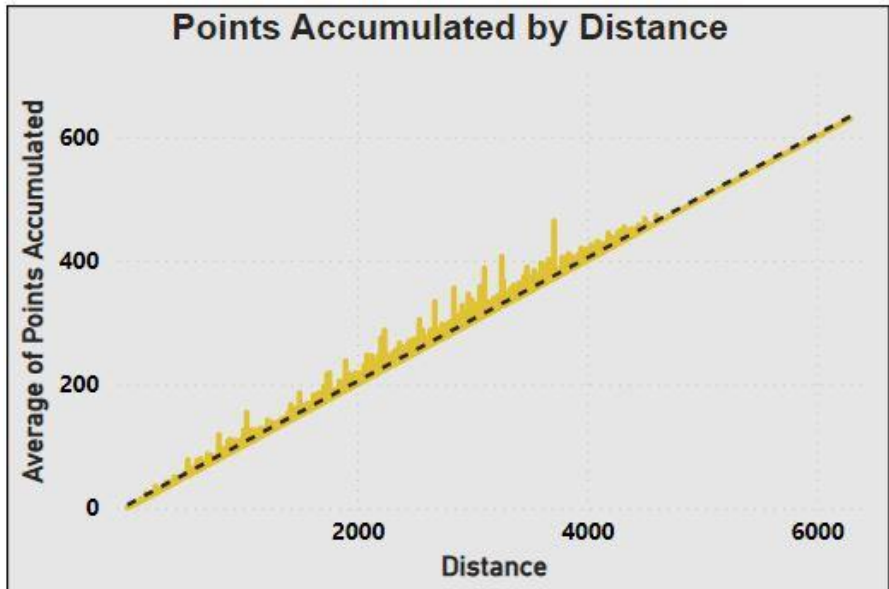
- Insight the customer flight pattern in a way that the company will be able to enhance and increase the customer experience.
- Identify the company's potential loyalty members.
- Analyze the customer retention rate in order to make the company's loyalty programs more effective.

Customer Flight Activity



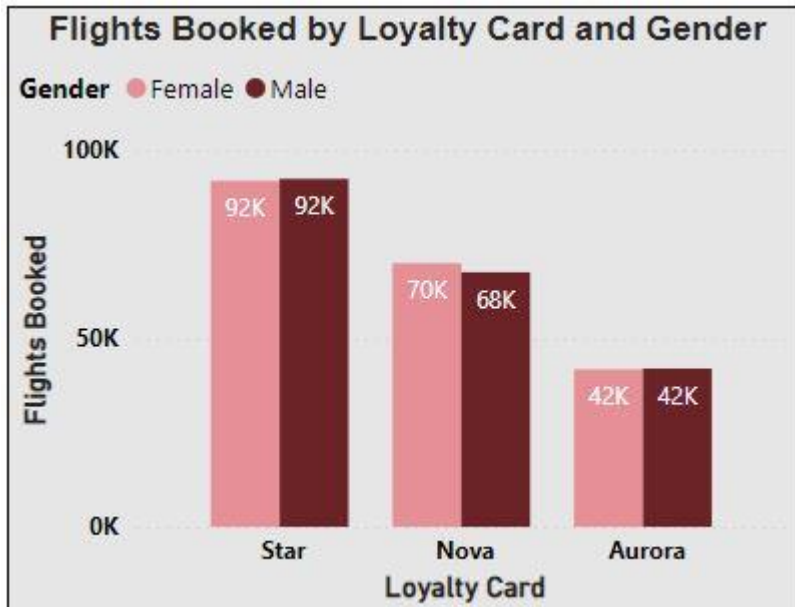
- Analyzed the total number of flights booked by Flying Whale Airline in every month during the years 2017 and 2018
- For the period of 2017 to 2018, customers travelled by Flying Whale Airline is gradually increased.
- The month wise comparison graph shows that flights booking rate has been increased in every single month of year 2018 as compare to previous year 2017.
- There is a significant number of customers using FlyingWhale Airline services during the holiday seasons, specifically from June to August and December, in both years.
- It indicates that many customers tend to travel during these periods, likely for summer vacations and winter holidays.

Customer Flight Activity



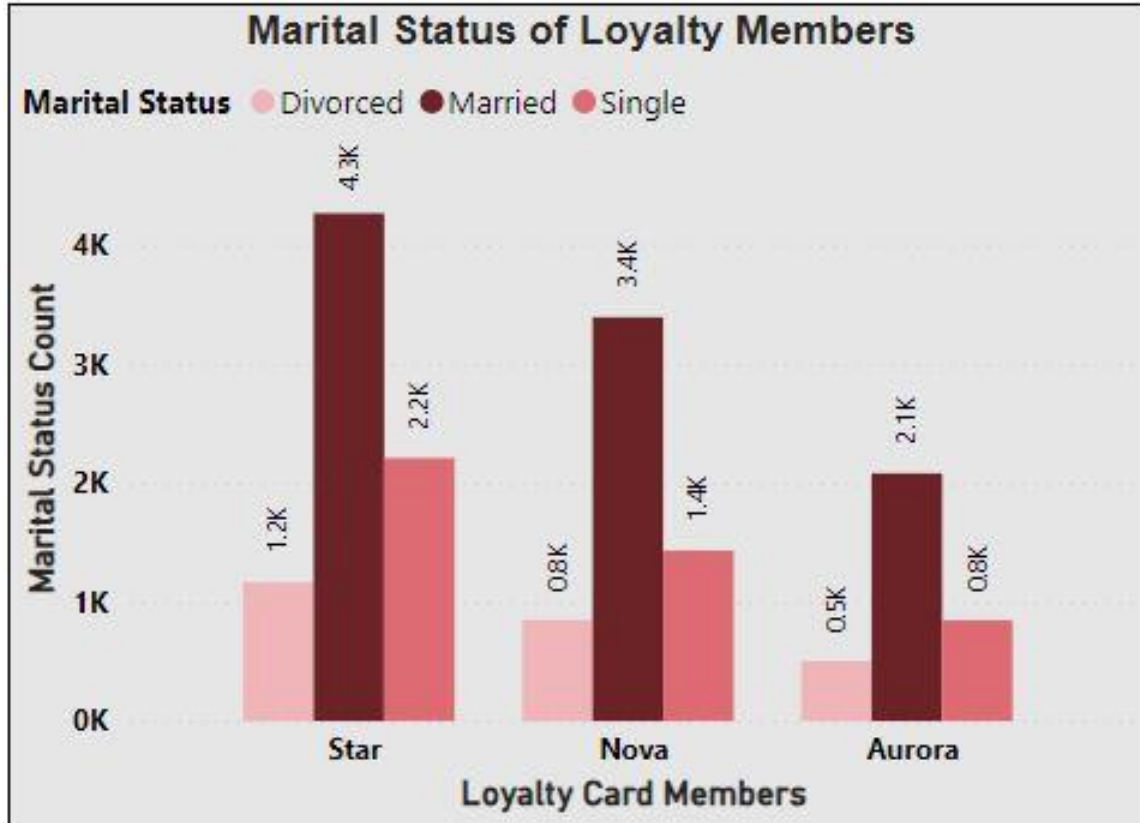
- The airline offers loyalty points to their customers based on the distance of their destinations.
- The point accumulated by distance graph shows the directly proportional relationship between the average loyalty points accumulation and distance. Longer the flight distance, the more loyalty points the customer can earn.
- The loyalty points redemption pattern is strongly correlated with the number of companions traveling with the loyalty card member.
- Members with 3 companions redeemed the most points, around 2M, which is the highest value among all categories.
- Members with 2 and 1 companions also showed significant point redemption values, more than 2M.
- Members with 4 and 5 companions had similar point redemption values, around 1.6M.
- Members with 11 companions had the lowest point redemption value, around 0.06M.

Customer Loyalty History



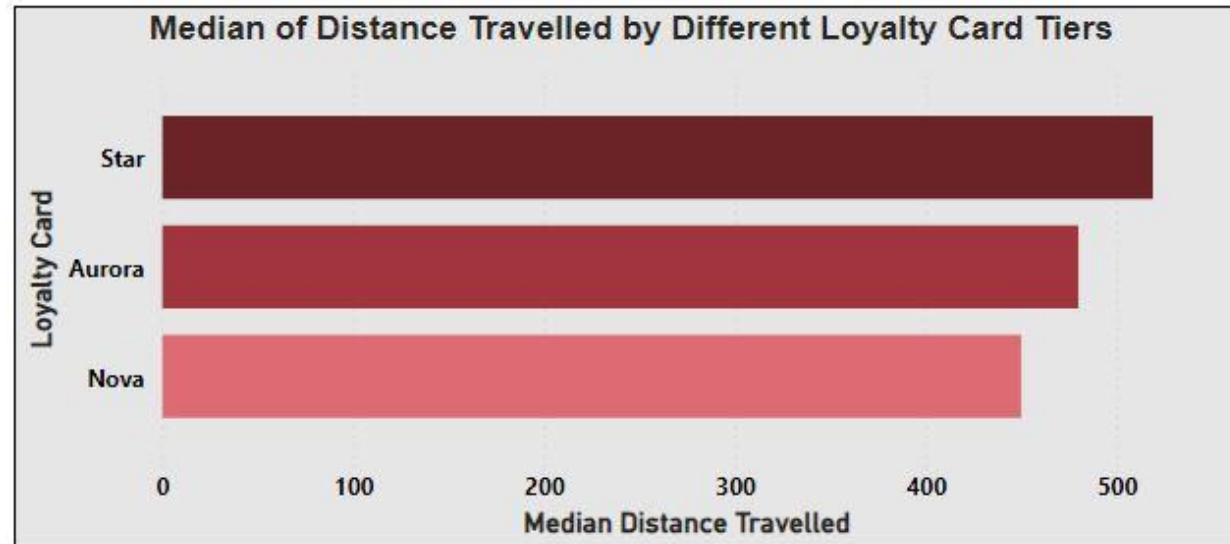
- Star loyalty card members have booked the most flights, with a total of around 184k bookings.
- This is significantly higher than the number of flights booked by Nova loyalty card members, which is around 138k, and Aurora loyalty card members, which is around 84k.
- The graphical results of loyalty card and gender shows that for Star card members, the number of flights booked by male and female members is equal, with both genders booking around 92k flights.
- In terms of gender, the star card members have balance demography.
- For Nova card members, the number of flights booked by female members is higher than male members, with 70k flights booked by females compared to 68k flights booked by males.
- For Aurora card members, the total number of flights booked is lower, with 42k flights booked by both male and female members.

Customer Loyalty History



- The marital status plays the significant role in loyalty cards usage for travel.
- The figures clearly indicate that married customers significantly dominant in the usage of all the three loyalty card categories.
- The highest numbers observed in the Star category 4.3k, followed by Nova 3.4k and Aurora 2.1k.
- .In second place, customers with a single marital status also show a substantial usage of loyalty cards for travel, with Star again leading the way 2.2k, followed by Nova 1.4k and Aurora 0.8k.
- While the figures of the customers who are divorced are low in all the three loyalty cards category.

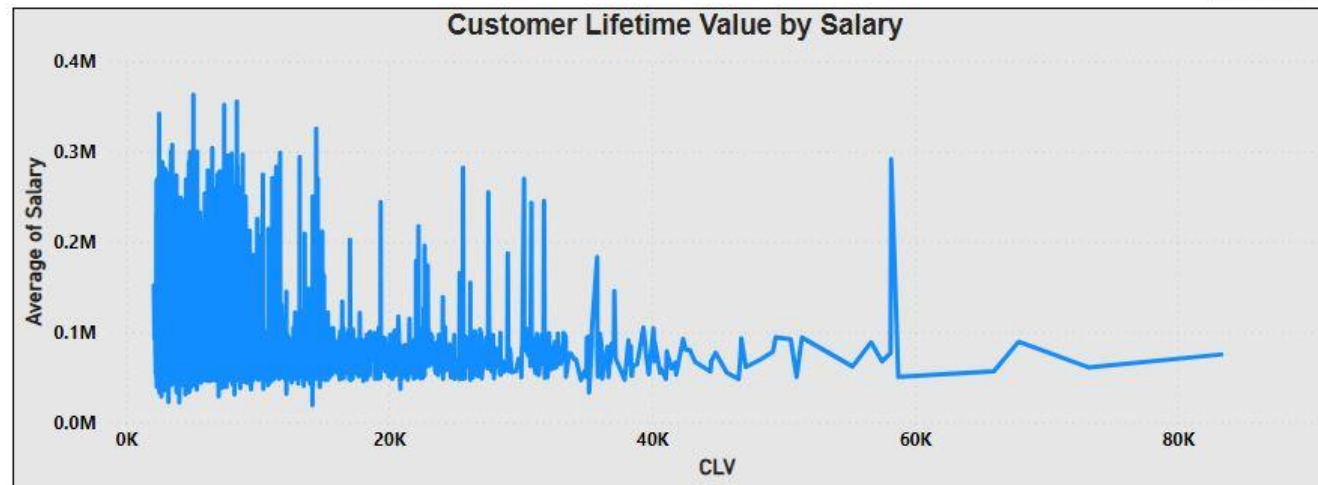
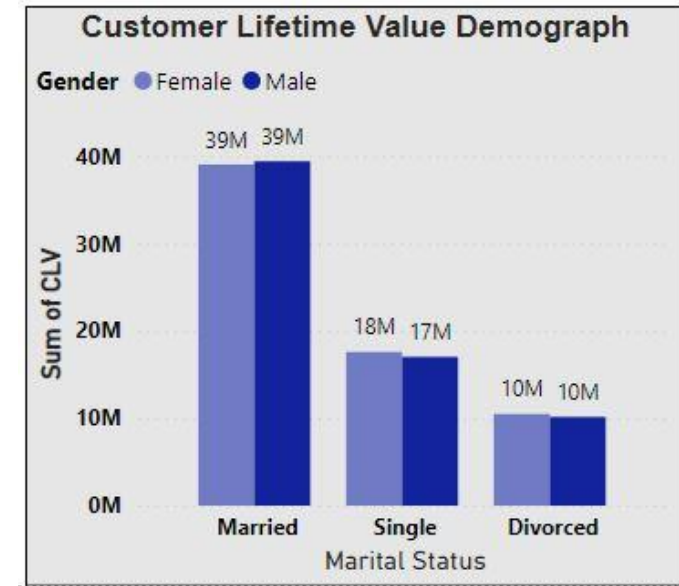
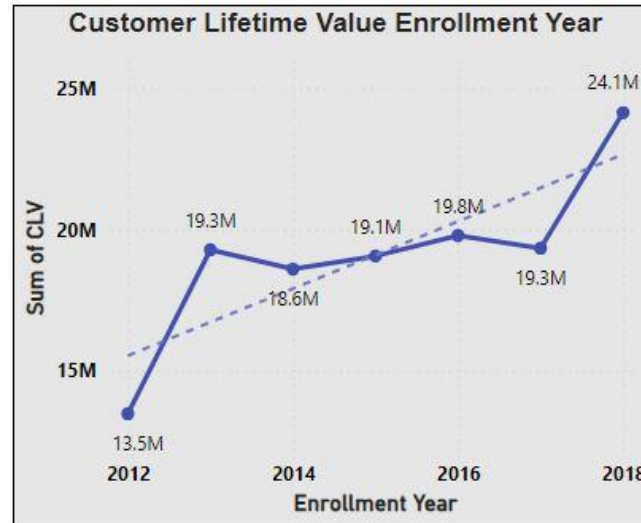
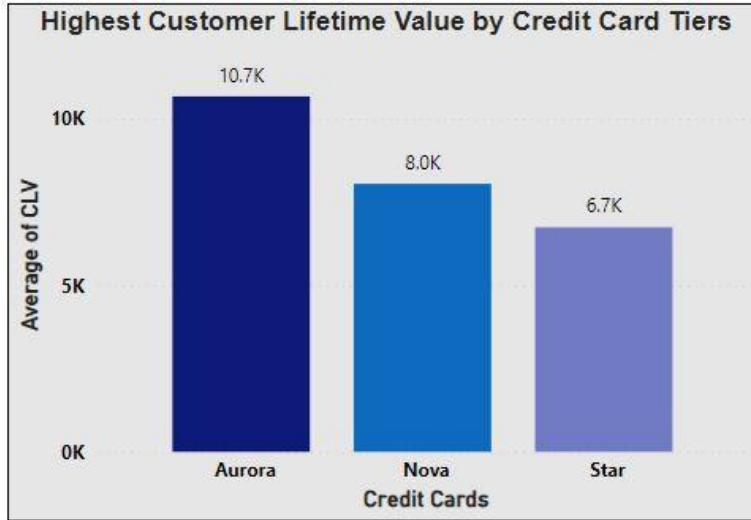
Customer Loyalty History



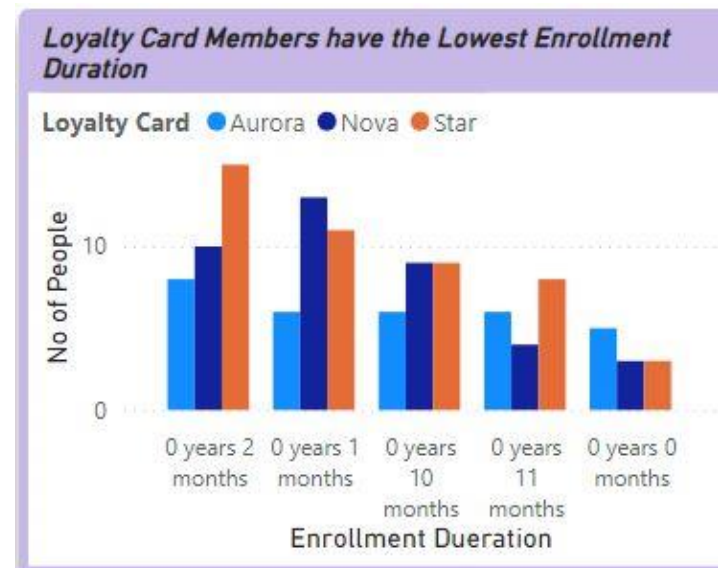
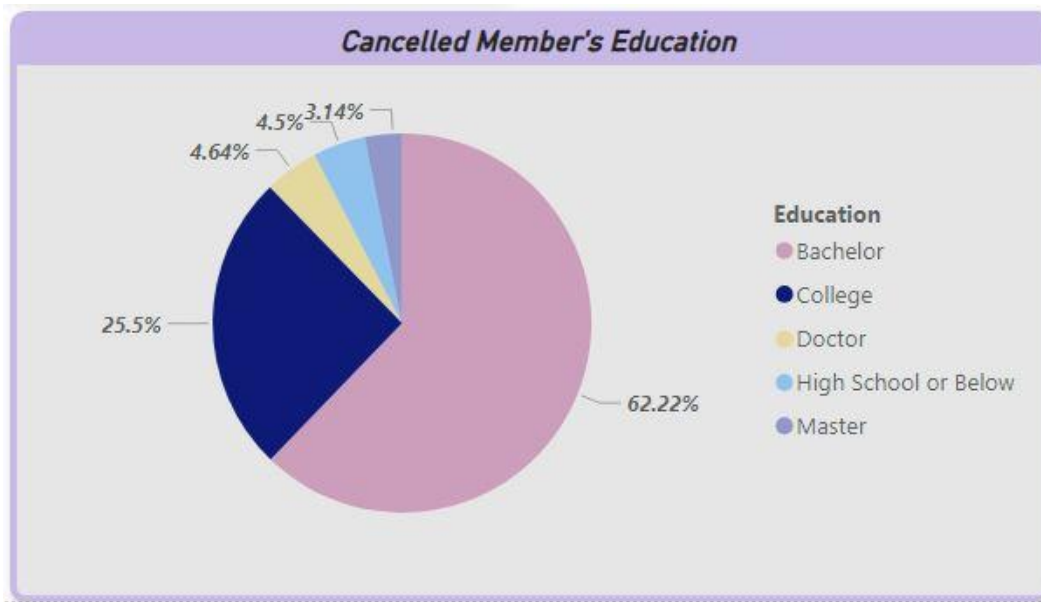
- The Star loyalty card holders have redeemed a significant number of points, with a total value of 5.7M, which is substantially higher than the Nova and Aurora cards.
- However, it's also important to note that the median distance travelled by loyalty card holders is highest for the Star membership card, which suggests that Star card holders tend to travel more frequently or over longer distances.
- This is particularly evident during the vacation season, where the median distance travelled is highest for all three cards.

Customer Loyalty History

The customer lifetime value trend is evaluated by different parameters such as loyalty card tiers, gender, customer marital status and customers salary.



Card Enrollment and Cancellation Trends



Findings

- The airline's loyalty program to reward their customers for traveling longer distances, which can motivate customers to choose FlyingWhale Airline for their longer trips. This can be an effective strategy for the airline to increase customer loyalty and retention.
- The flights booking by loyalty cards graph shows that airline's loyalty program may offer more benefits or rewards to Star loyalty card members, making them more likely to book flights.
- Nova card members have a slightly higher proportion of female flyers. While Aurora card members have a smaller but more balanced demographic in terms of gender.
- It's interesting to note from CLV by Credit card graph that despite having a larger customer base, the Star card holders have a lower average customer lifetime value compared to the Aurora card customers. The statistics show that the Aurora card customers are more valuable to the business in the long run, they are potential customers for the company who are stay loyal for a longer period.

Recommendations

- Offer targeted promotions and discounts to customers during holidays season to motivate them to book their flights in advance.
- Optimize their pricing strategy to maximize revenue during these peak periods.
- Enhance their customer service to handle the increased volume of customers and ensure that their needs are met during these busy periods.
- By understanding the seasonal patterns of customer behavior, FlyingWhale Airline can better prepare and respond to the changing demands of their customers, ultimately leading to increased customer satisfaction and loyalty.
- The airline's loyalty program may offer more rewards or benefits for customers who travel with smaller groups or large groups. It helps the company to attract more potential customers.
- The company can offer personalized offers and rewards to Aurora card customers to increase their loyalty and retention.