flyingwhale.

Flight Activity Analysis

Loyalty Segmentation

Enrollment & Cancellation

Business Intelligence Case Study: FlyingWhale Airline

Analysis

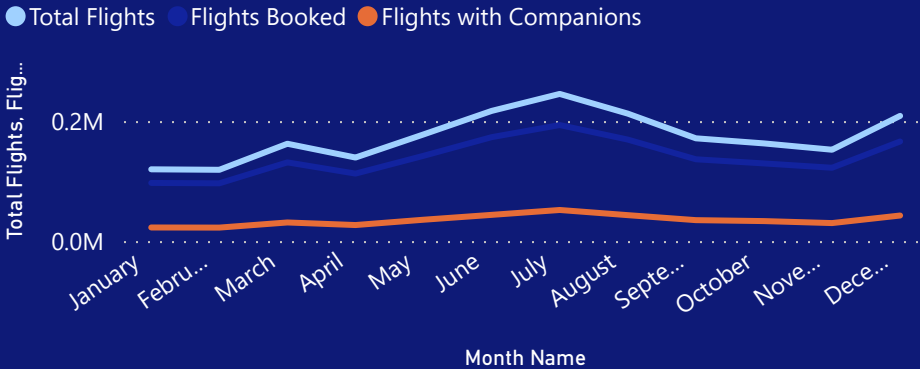Insights& Recommendation

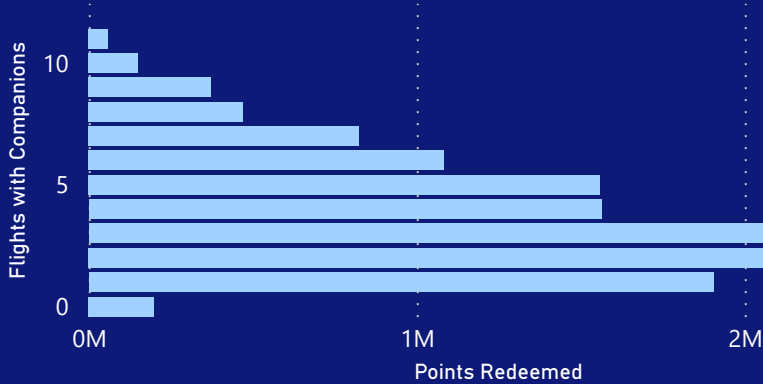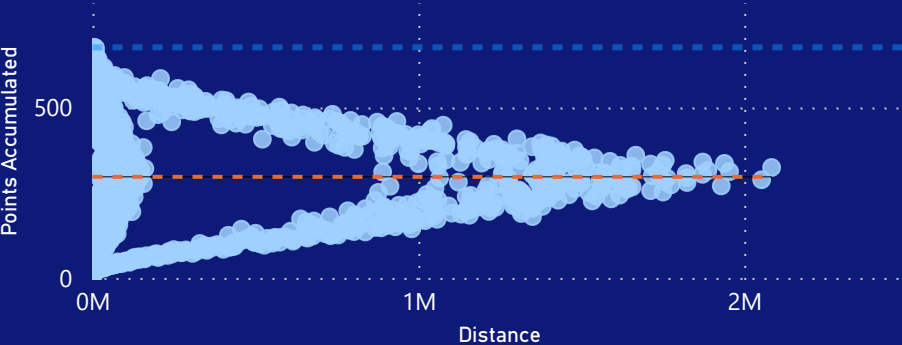# Flight Activity Analysis

Loyalty Segmentation

Flight Trends

● Total Flights ● Flights Booked ● Flights with Companions

Total Flights by Month Name and Loyalty Card

Loyalty Card ● Aurora ● Nova ● Star
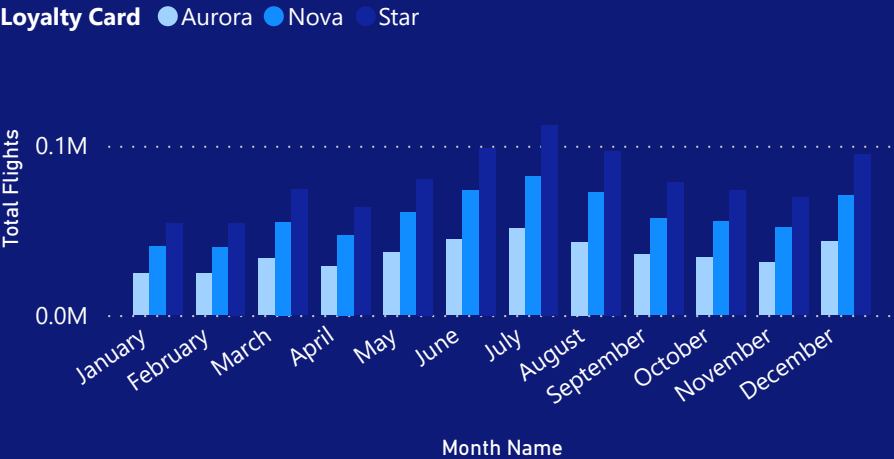
Flights Booked by Loyalty Card and Gender

Gender ● Female ● Male

Points Redeemed by Flights with Companions
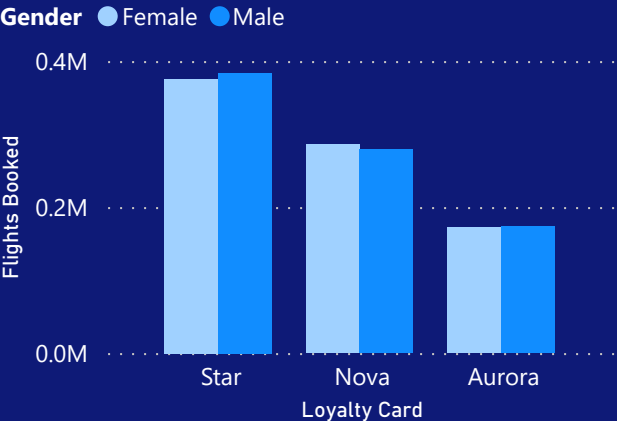
Count of Loyalty Number by Marital Status
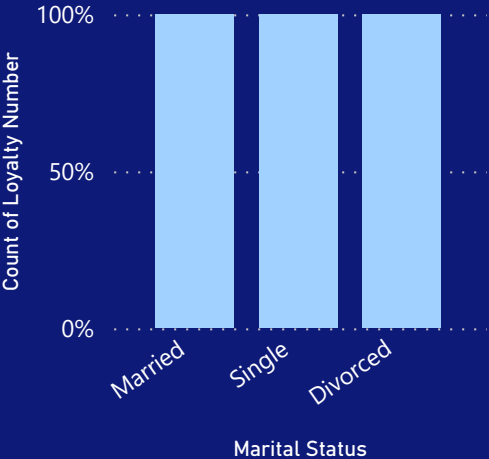
Average of CLV by Loyalty Card

Median of Distance by Loyalty Card

Distance by Points Accumulated
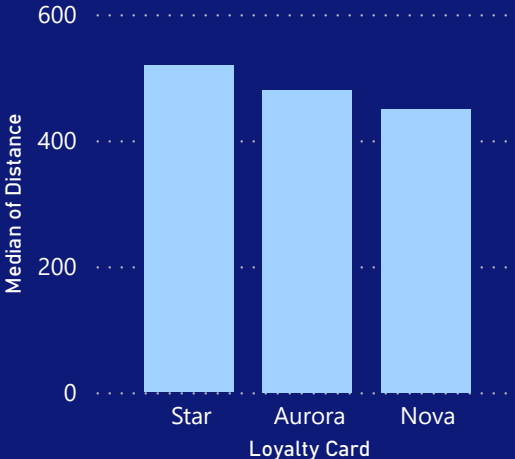
Total Flights Booked was higher for Male (836166) than Female (832998). Star in Gender made up 22.99% of Flights Booked. Flights Booked for Male and Female diverged the most when the Loyalty Card was Star, when Male were 8098 higher than Female. Married accounted for 58.16% of Count of Loyalty Number. Married had the highest Count of Loyalty Number at 9,735, followed by Single at 4,484 and Divorced at 2,518. Auro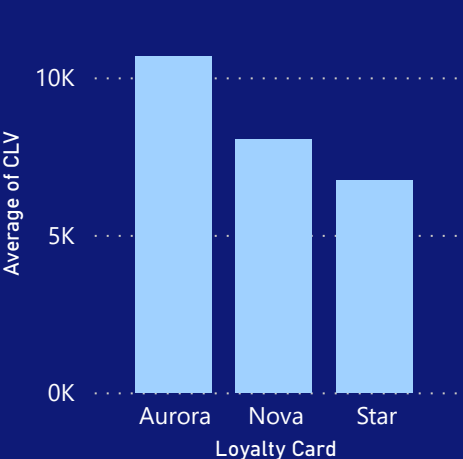ra had the highest Average of CLV at 10,672.69, followed by Nova at 8,045.62 and Star at 6,741.76. Star had the highest Median of Distance at 519, followed by Aurora at 480 and Nova at 450.

Enrollment and Cancellation Trends

Average of Enrollment Duration till Date (Months) by Province
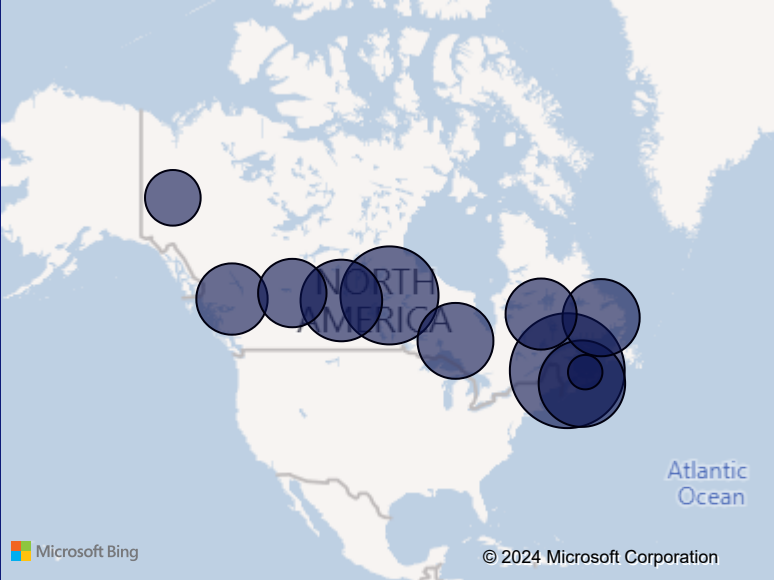
Average of Enrollment Duration (Months) by Province

Province (top to bottom): New Brunswick, Manitoba, Nova Scotia, Saskatchewan, Newfoundland, Ontario, British Columbia, Quebec, Alberta, Yukon, Prince Edward Island

X-axis: Average of Enrollment Duration (Months) — 0, 5, 10, 15, 20
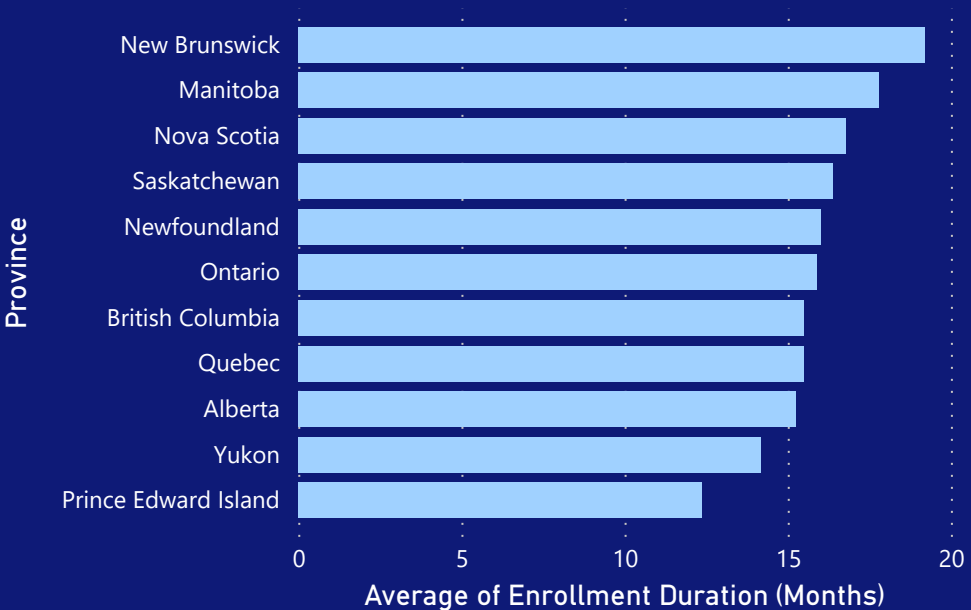
Enrollment Duration (Months) by Loyalty Card

Y-axis: Enrollment Duration (Months) — 0K, 5K, 10K, 15K, 20K
X-axis: Loyalty Card — Star, Nova, Aurora
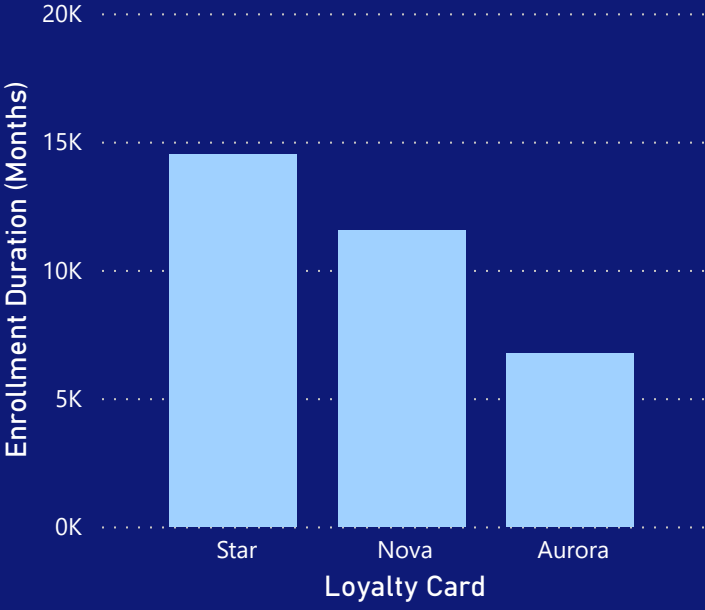
Count of Cancellation Month by Cancellation Month Name

Y-axis: Count of Cancellation Month — 0, 100, 200
X-axis: Cancellation Month Name — December, November, August, July, October, September, June, January, March, May, February, April
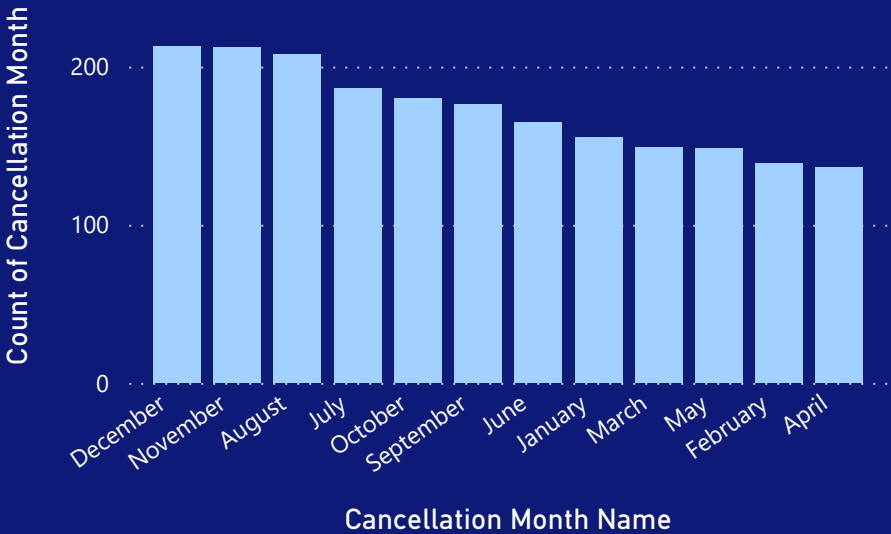
Count of Loyalty Number by Education

Y-axis: Count of Loyalty Number — 0, 500, 1,000
X-axis: Education — Bachelor, College, Doctor, High School or Below, Master

Count of Loyalty Number by Marital Status

Y-axis: Count of Loyalty Number — 0, 500, 1,000
X-axis: Marital Status — Married, Single, Divorced
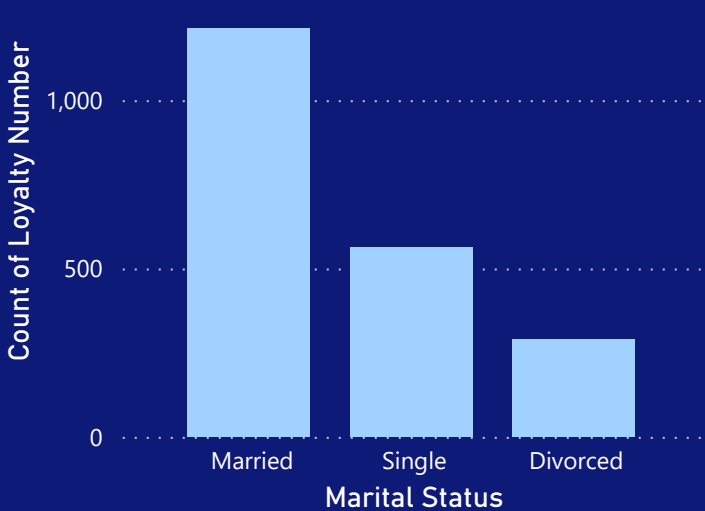
Analysis

Month-wise Analysis:
- July had the highest Total Flights, accounting for 11.75% of the total.
- Total Flights ranged from 118,849 to 245,298 across all 12 months, with July being the highest.
- July also accounted for 5.38% of Total Flights in Loyalty Card segment.

Correlation Analysis:
- Total Flights and Total Flights Booked are positively correlated with each other.

Loyalty Card Analysis:
- Star had the highest total and highest average Total Flights, followed by Nova and Aurora.
- Star accounted for the highest percentage of Flights Booked in the Gender segment.

Gender Analysis:
- Total Flights Booked was higher for Males than Females.
- Flights Booked for Males and Females diverged the most when the Loyalty Card was Star, with Males booking significantly more flights than Females.

Marital Status Analysis:
- Married individuals accounted for the highest count of loyalty members, followed by Single and Divorced.
- Most cancellations are from Married individuals.

Province-wise Analysis:
- New Brunswick had the highest average Enrollment Duration, followed by Prince Edward Island.
- Across all provinces, the average Enrollment Duration ranged from 12.36 to 19.21 months.

Insights & Recommendation

Insights:

July seems to be a peak month for flight bookings. The airline can capitalize on this trend by offering special promotions or discounts during this month to attract more customers.

The more flights are booked, the higher the total number of flights. The airline should focus on increasing flight bookings to boost overall flight numbers.

Star loyalty cardholders are the most frequent flyers. The airline should introduce loyalty programs or perks specifically targeting Star cardholders to maintain their loyalty and encourage repeat bookings.

There seems to be a gender disparity in flight bookings, particularly among Star cardholders. The airline should investigate the reasons behind this disparity and implement targeted marketing strategies to attract more female customers.

Married individuals are a significant customer segment for the airline but also contribute to the highest number of cancellations. The airline should focus on understanding the reasons behind cancellations among married individuals and implement retention strategies to reduce churn within this segment.

Customers from certain provinces have higher average enrollment durations, indicating stronger loyalty. The airline can target marketing efforts towards these provinces to attract more loyal customers.

Recommendations:

Promotional Strategies:
Offer special promotions or discounts during peak months like July to increase flight bookings.
Introduce loyalty programs or perks targeting Star cardholders to maintain their loyalty.

Gender-focused Marketing:
Implement targeted marketing campaigns to attract more female customers, especially among Star cardholders.

Retention Strategies:
Implement retention strategies targeting married individuals to reduce churn and increase customer loyalty.

Provincial Targeting:
Target marketing efforts towards provinces with higher average enrollment durations to attract more loyal customers.

Customer Experience Enhancement:
Enhance the overall customer experience to improve satisfaction and loyalty, leading to reduced cancellations.