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Content

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Objective

FlyingWhale Airline, a prominent (fictional) international airline, seeks to enhance its business intelligence capabilities by analyzing **Customer Flight Activity** and **Customer Loyalty History**. The airline is committed to optimizing the customer experience, understanding travel patterns, and maximizing the effectiveness of its loyalty programs.

# Key Insights

Flight Activity Analysis

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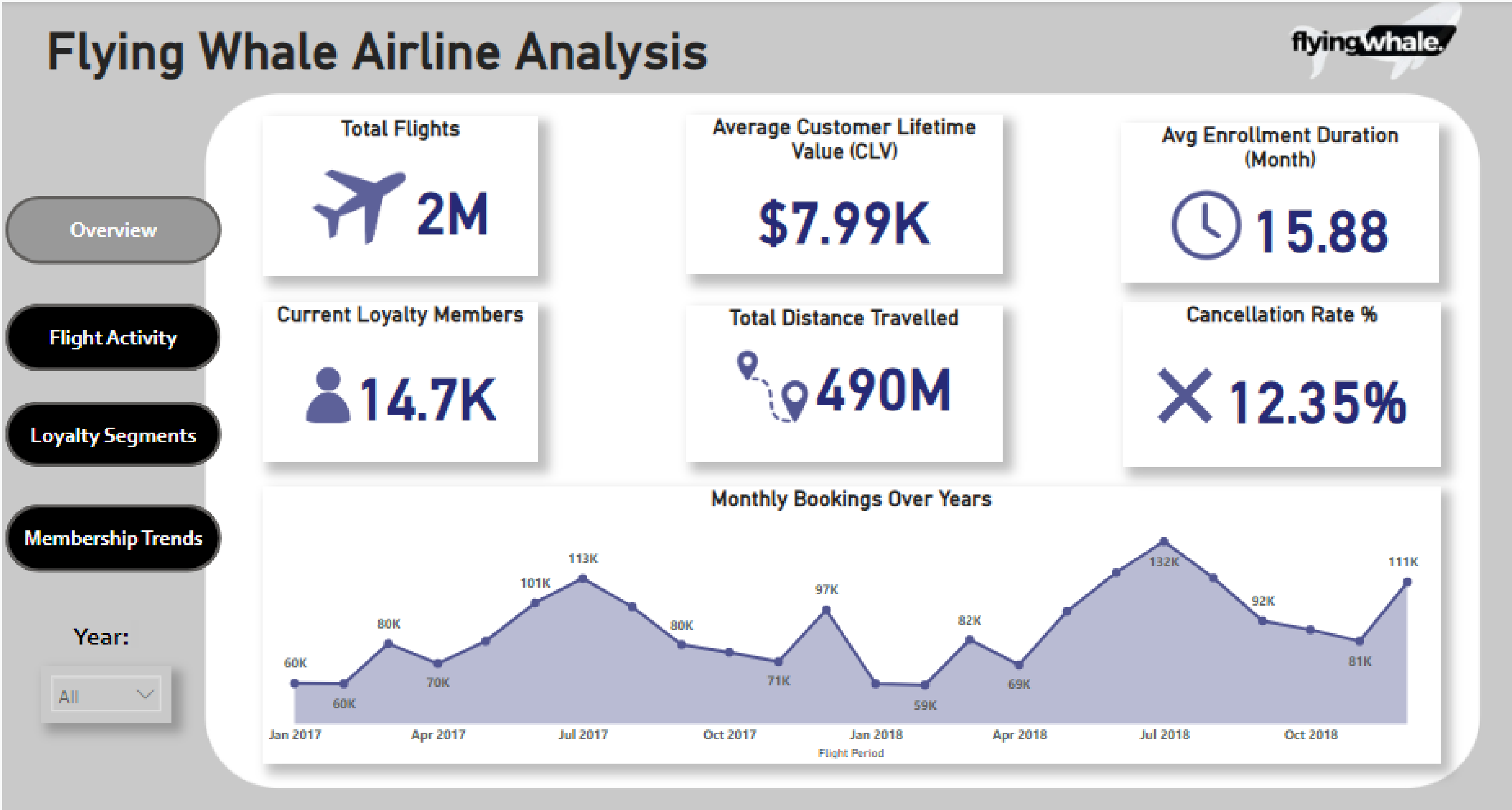
Seasonal Booking Insights

- **Clear Yearly Rhythm:** Bookings fluctuate with peaks likely driven by **spring break, summer vacations (July), and holiday travel (December)**, with lulls in between.

- **Consistent Year-to-Year:** 2017 and 2018 show similar trends, but 2018 has higher peaks, suggesting growth.

Strategic Implications

- **Maximize Peak Seasons:** Boost capacity and promotions aligned with **spring break, summer, and holidays** to capitalize on high demand.

- **Combat Off-Season Dips:** Introduce **incentives** to encourage travel during slower periods. Consider the start of the school year as a potential reason for the post-summer dip.

- **Forecast & Optimize:** Use this predictability for better capacity management, dynamic pricing, and targeted marketing.

Monthly Bookings Over Years

Flight Activity Analysis

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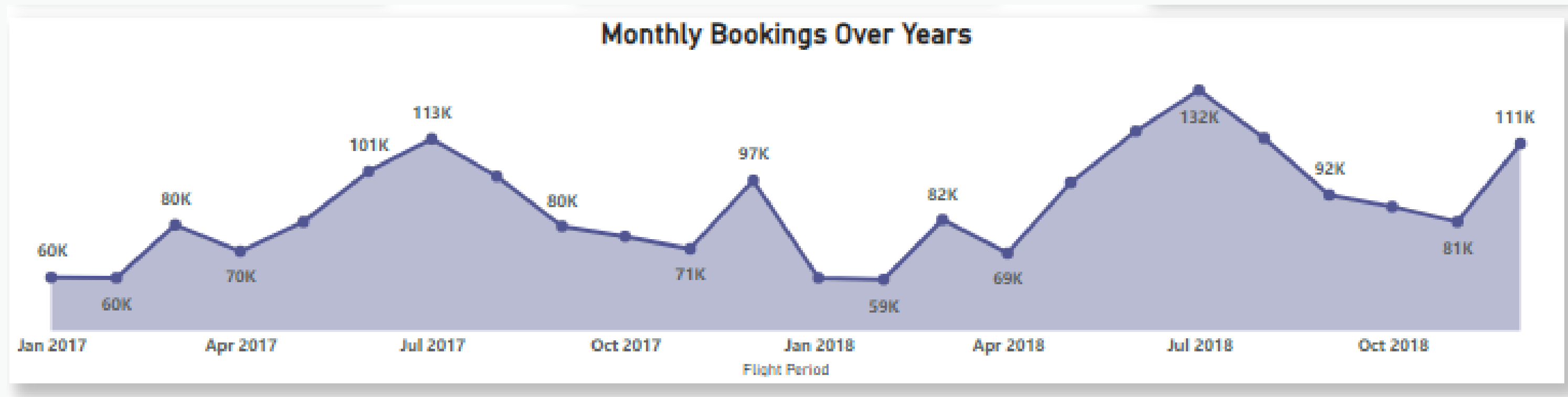
Flight Distance vs. Loyalty Points

- **Strong Positive Correlation:** Customers earn more loyalty points for longer flights.
- **Outliers:** Some very long flights yield exceptionally high points, likely representing frequent or long haul flyers.
- **Potential Points Cap:** The dashed line suggests a maximum accumulation limit, or it could be the highest value in this dataset.

Correlation of Points Accumulated Vs Distance
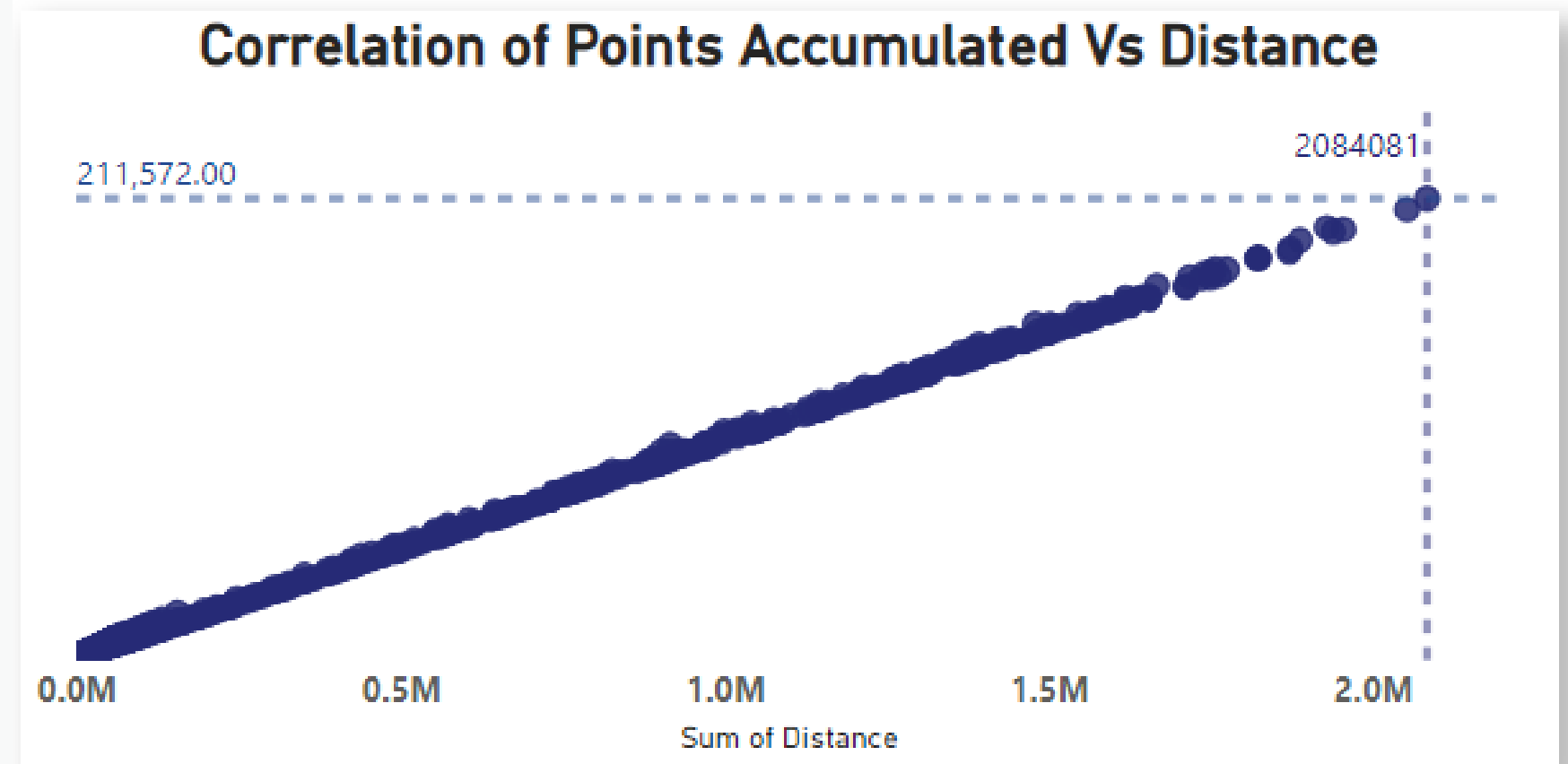
Business Implications

- **Target Long-Distance Travelers:** Consider incentives to reward these high-value customers further.
- **Review Points Formula:** Is there a distance where points don't increase proportionally? This could inform potential adjustments.
- **Utilize for Prediction:** Model this relationship to forecast points liability and for targeted promotions

Flight Activity Analysis

Points Redeemed vs. Flight Companions

- **Peak with Small Groups:** Customers redeem the most points with **2 or 3** companions, suggesting strong loyalty engagement within these groups.
- **Diminishing Returns:** Points redeemed **decrease** as group size grows beyond 3. Larger groups are either less likely to redeem or book less frequently.
- **Lowest for Solo & Large Groups** Single travelers (0 companions) and very large groups (10 companions) redeem the fewest points.
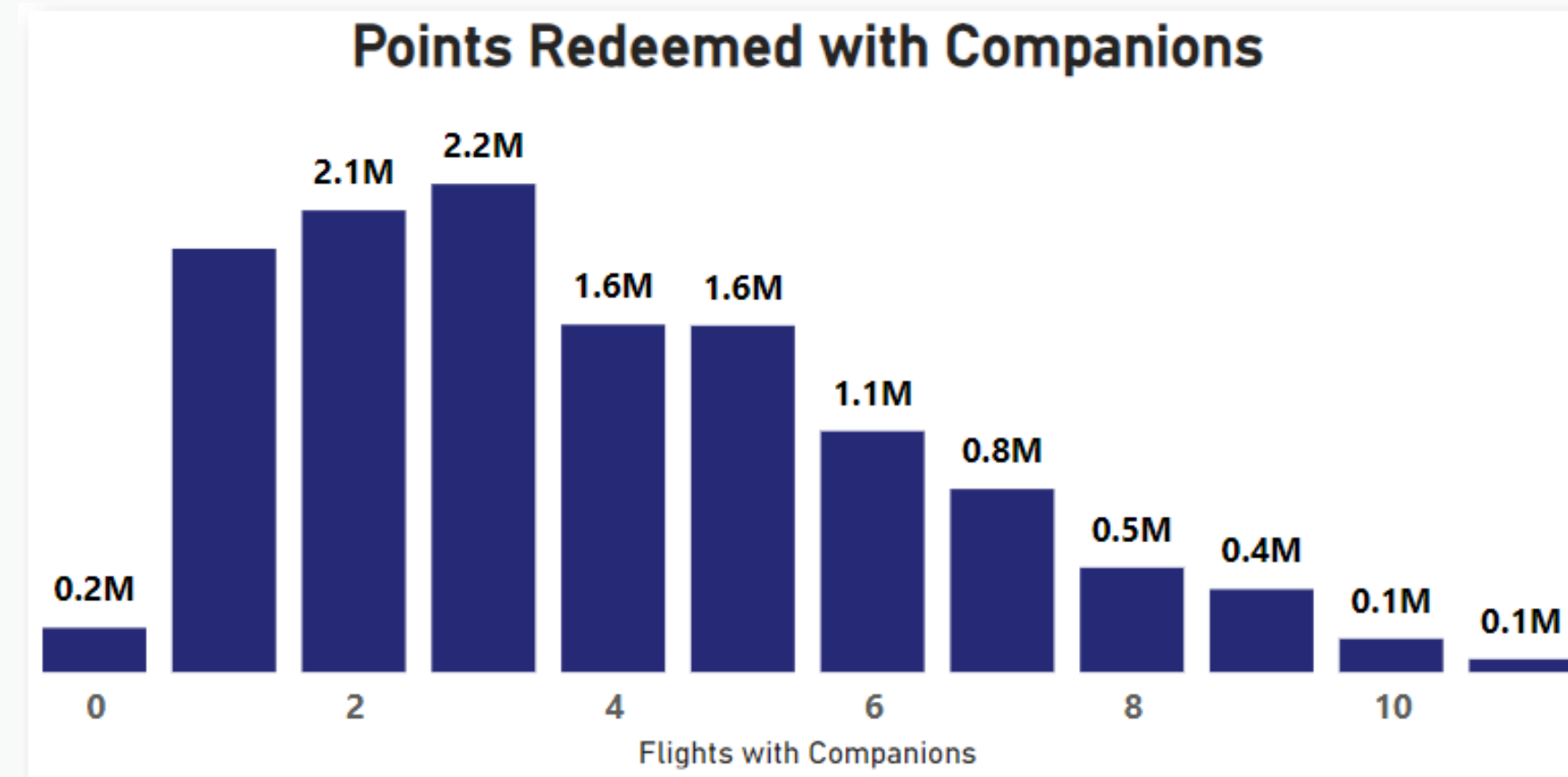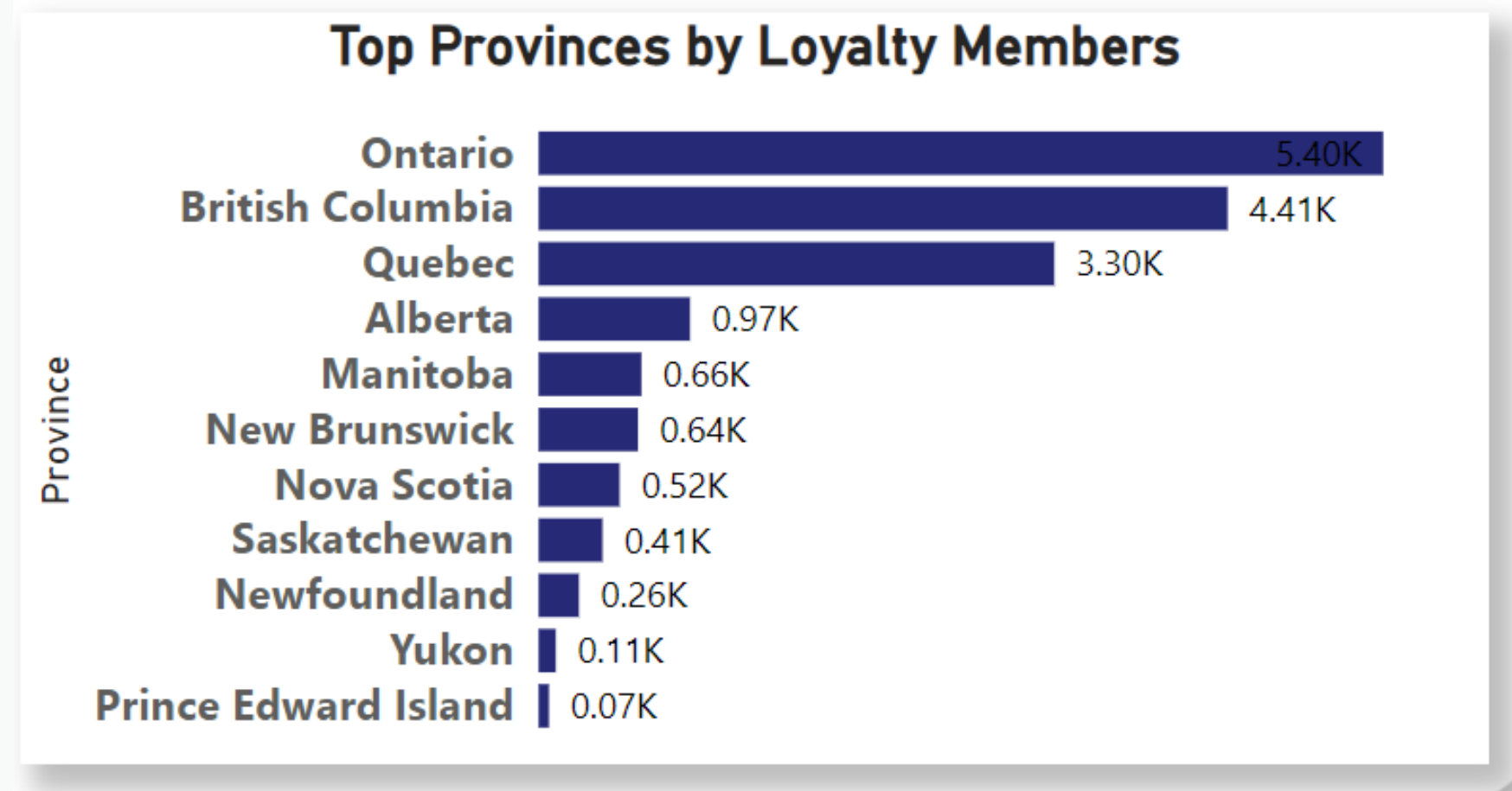
Strategic Implications

- **Target 2-3 Companion Groups:** Promotions for this group could have a high return on investment.
- **Investigate Larger Group Redemption:** Explore why point redemption drops for larger groups – this may reveal loyalty program improvement opportunities.

Points Redeemed with Companions

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Member Distribution Across Canada

- **Ontario Dominance:** The highest membership concentration is in **Ontario**, making it the primary market for the loyalty program.
- **BC & Quebec as Key Markets:** These provinces follow Ontario, highlighting their importance as well
- **Alberta's Potential:** Alberta represents a smaller, but still significant market segment.
- **Opportunity in the East:** Lower membership in Eastern and Northern provinces suggests potential for targeted expansion.

Top Provinces by Loyalty Members

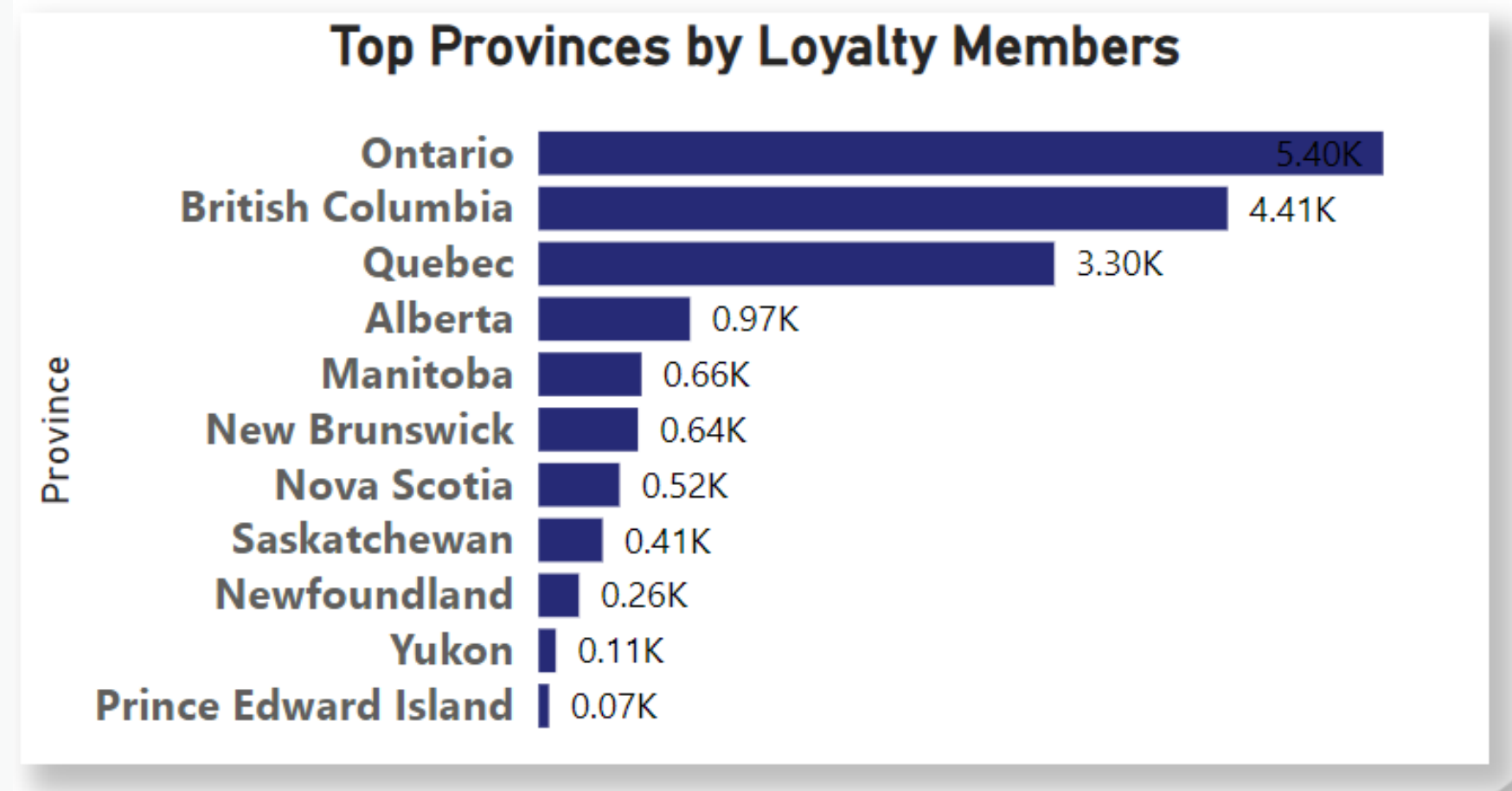| Province	Members
Ontario	5.40K
British Columbia	4.41K
Quebec	3.30K
Alberta	0.97K
Manitoba	0.66K
New Brunswick	0.64K
Nova Scotia	0.52K
Saskatchewan	0.41K
Newfoundland	0.26K
Yukon	0.11K
Prince Edward Island	0.07K

Flight Activity Analysis

Strategic Implications

- **Optimize Ontario Focus:** Tap into Ontario's strong base with tailored promotions, routes, and rewards.
- **Prioritize BC & Quebec:** Invest in these key markets to strengthen engagement.
- **Explore Alberta Growth:** Consider strategies to increase loyalty penetration in this province.
- **Target Eastern Growth:** Promotions and expanded routes could increase membership in underrepresented regions.
- **Investigate Regional Differences:** Understand what drives membership concentration in certain provinces to inform tailored loyalty strategies.

Top Provinces by Loyalty Members

Province	Loyalty Members
Ontario	5.40K
British Columbia	4.41K
Quebec	3.30K
Alberta	0.97K
Manitoba	0.66K
New Brunswick	0.64K
Nova Scotia	0.52K
Saskatchewan	0.41K
Newfoundland	0.26K
Yukon	0.11K
Prince Edward Island	0.07K

Loyalty Segmentation Analysis

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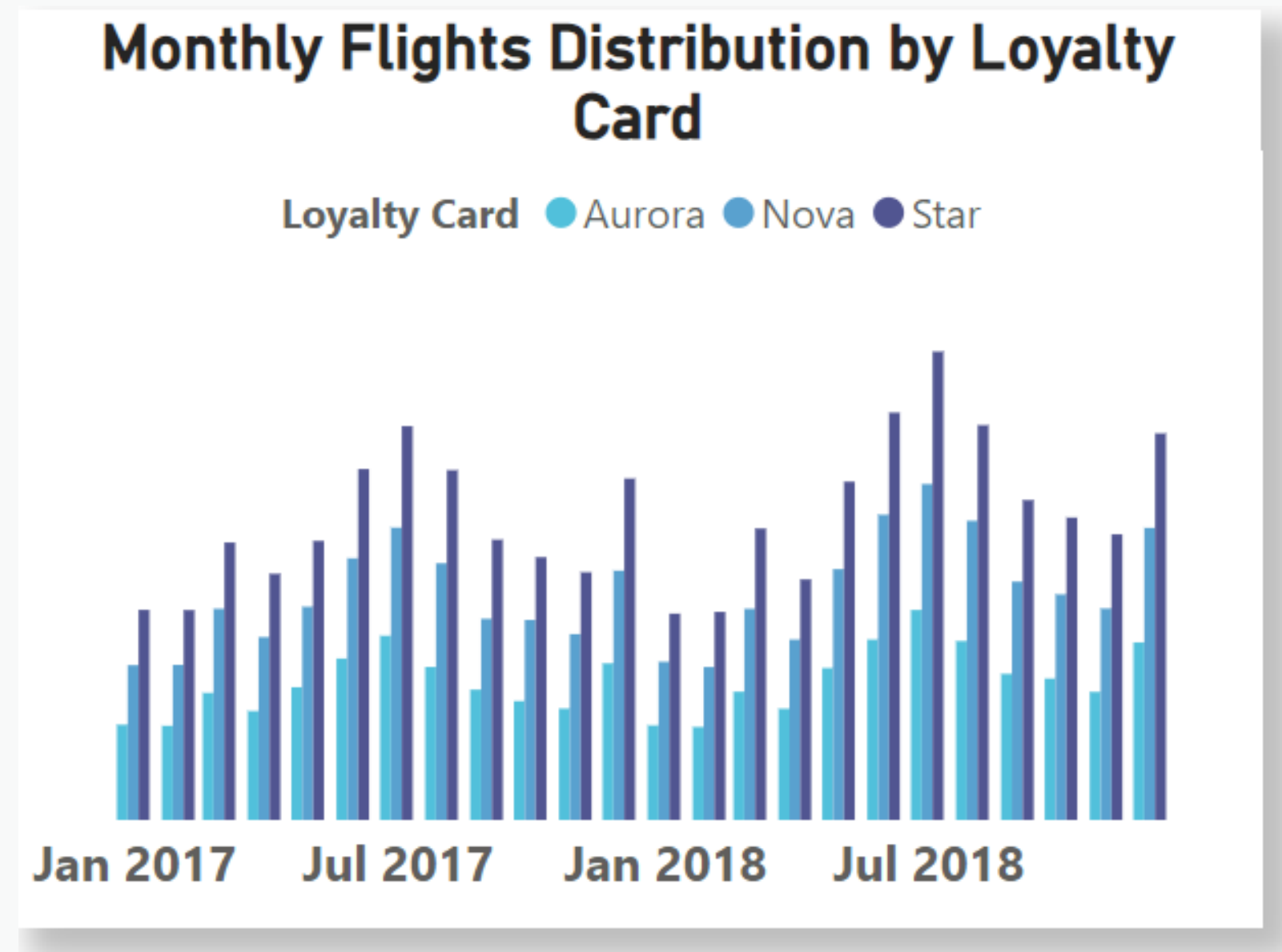
Flights by Loyalty Tier

- **Multiple Tiers:** The chart visualizes flight patterns for three loyalty tiers **(e.g., Aurora, Nova, Star).**
- **Shared Seasonality:** All tiers likely follow similar **seasonal trends** seen in overall bookings.
- **Tier Volume:** Bar heights reveal which tier **flies the most**. Higher bars suggest frequent flights within a tier.
- **Tier Growth:** Track how flight volume changes over time within each tier to gauge program success or engagement shifts.

Monthly Flights Distribution by Loyalty Card

Loyalty Card — Aurora, Nova, Star

Jan 2017 — Jul 2017 — Jan 2018 — Jul 2018

Strategic Implications

- **Targeted Loyalty Programs:** Understand what drives flight frequency in each tier to create tailored rewards and incentives.
- **Tier-Specific Promotions:** Tailor promotions to boost engagement in less-active tiers or during offpeak periods.

Loyalty Segmentation Analysis
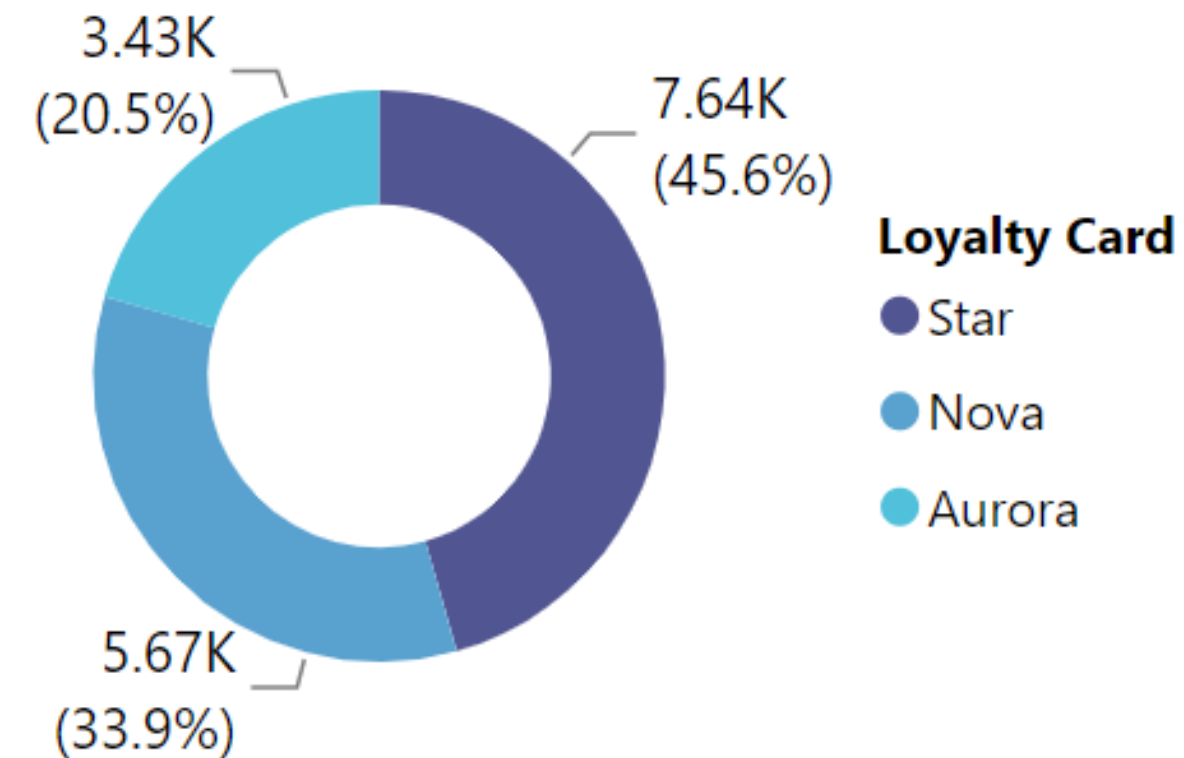
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Membership by Tier

- **Star Dominates:** With **7.64K** members (**45.6%** of the total), Star suggests strong engagement or program longevity.
- **Aurora's Strength:** **5.67K** members (**33.9%**) indicates significant participation in this tier.
- **Nova's Niche:** The smallest membership at **3.43K** (**20.5%**) suggests Nova might be a premium tier or a recent addition.

Customer Segmentation By Loyalty Card

3.43K (20.5%)
7.64K (45.6%)
5.67K (33.9%)

Loyalty Card
- Star
- Nova
- Aurora

Strategic Implications

- **Understand Star Appeal:** Why is Star so popular? Replicate its success in other tiers.
- **Grow Aurora:** Investigate if Aurora's 5.67K member base has reached its potential. Explore growth strategies.
- **Define Nova's Role:** If premium, ensure benefits align to attract high-value customers. If new, focus on targeted acquisition.

Loyalty Segmentation Analysis

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Marital Status Insights

- **Married Majority:** Over half **(58.2%)** of members are married, highlighting this group's importance.
- **Significant Singles:** Singles represent a sizable segment **(26%)** of the loyalty program.
- **Divorced Minority:** This group comprises the smallest portion of the membership base **(15%).**

Customer Segmentation by Marital Status

2.52K (15.0%)

4.48K (26....)

9.74K (58.2%)

Marital Status
- Married
- Single
- Divorced
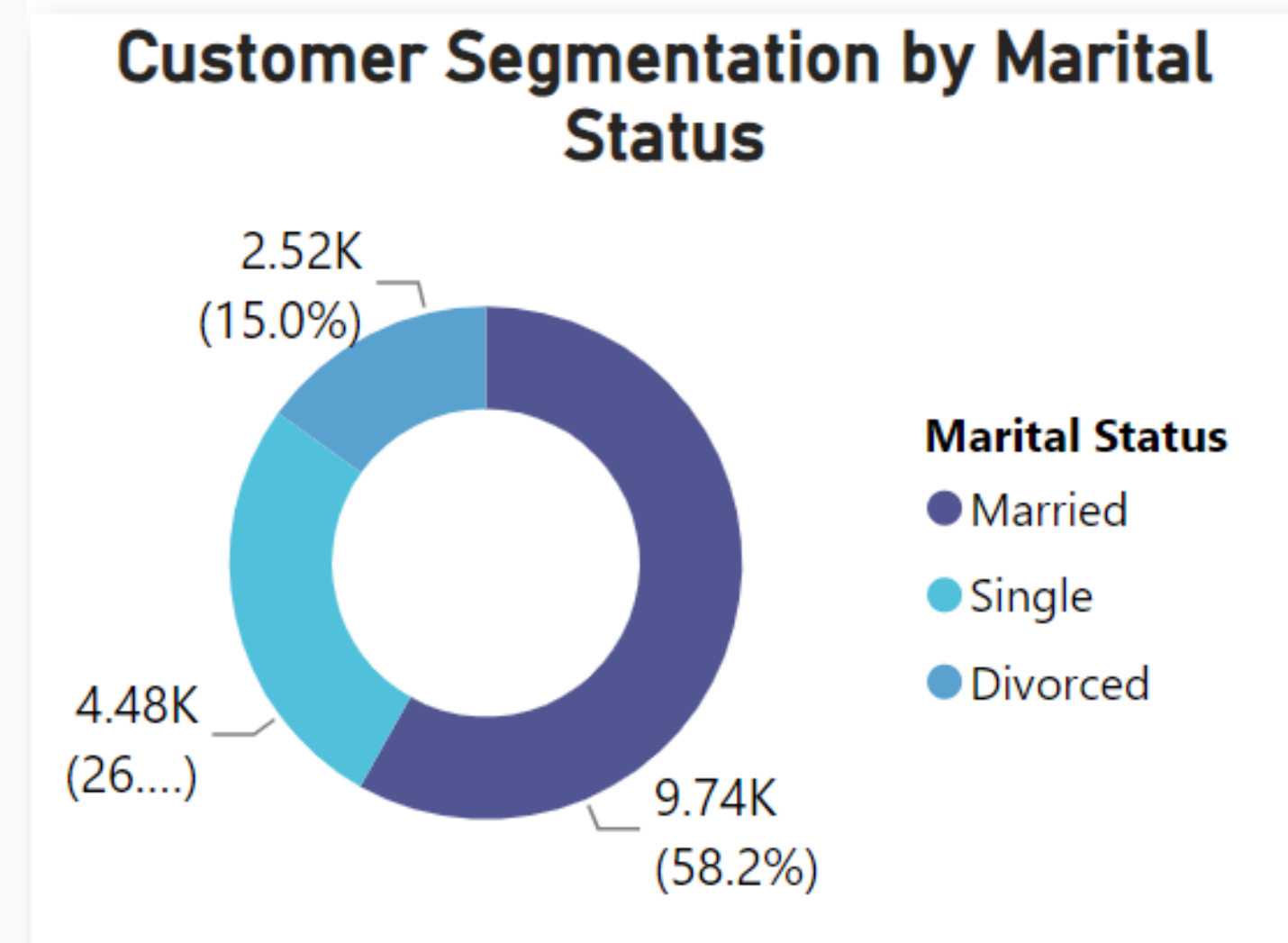
Strategic Implications

- **Tailor to Married Members:** Offers, rewards, and communications should resonate with this dominant segment.
- **Don't Neglect Singles:** Consider promotions or benefits attractive to single travelers.
- **Sensitivity for Divorcees:** Messaging and offers should be inclusive without inadvertently ignoring this demographic
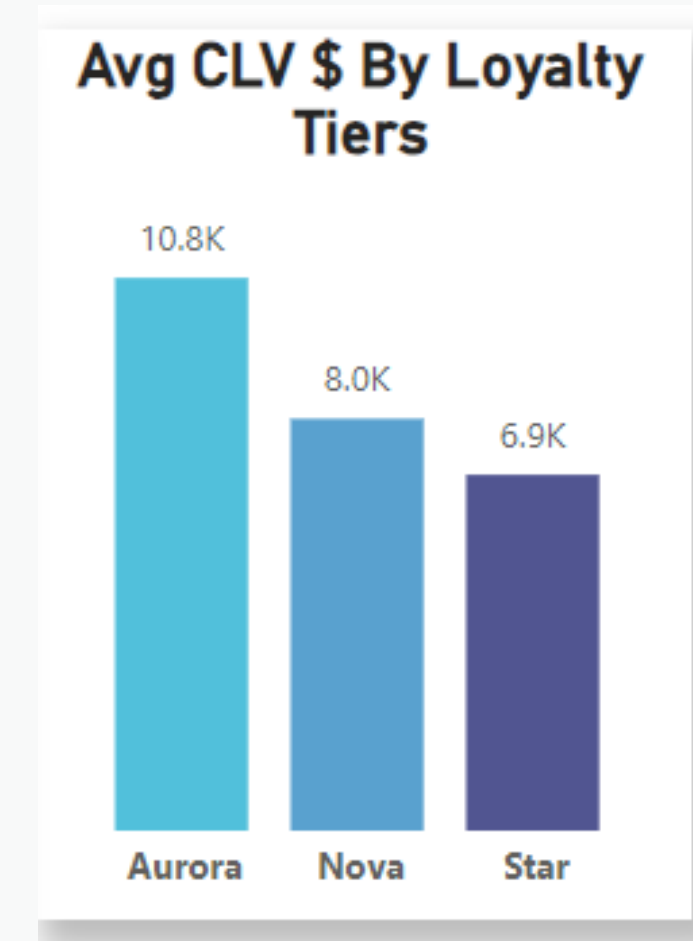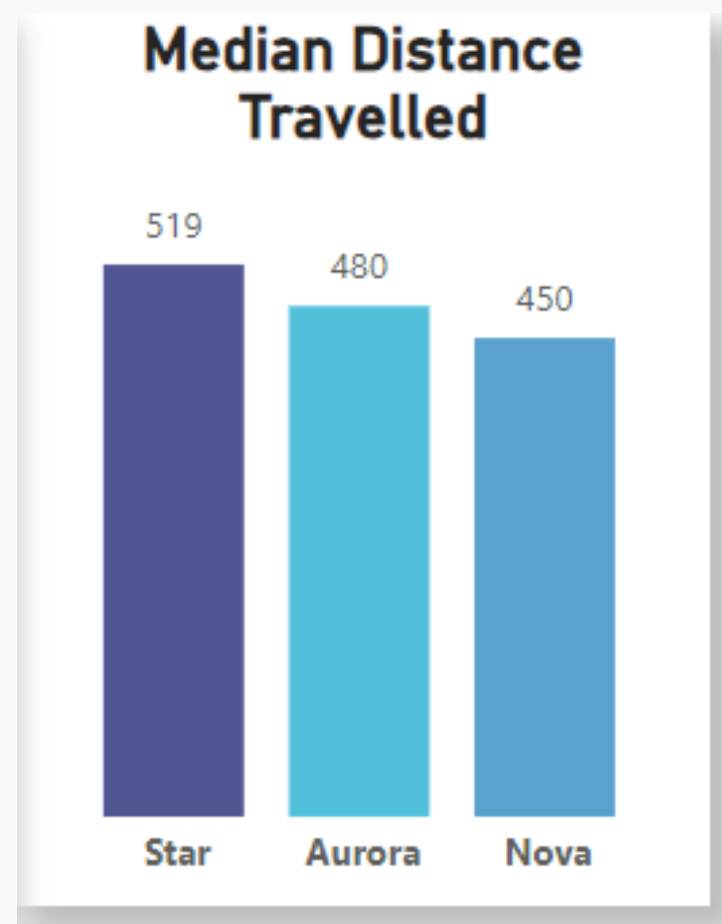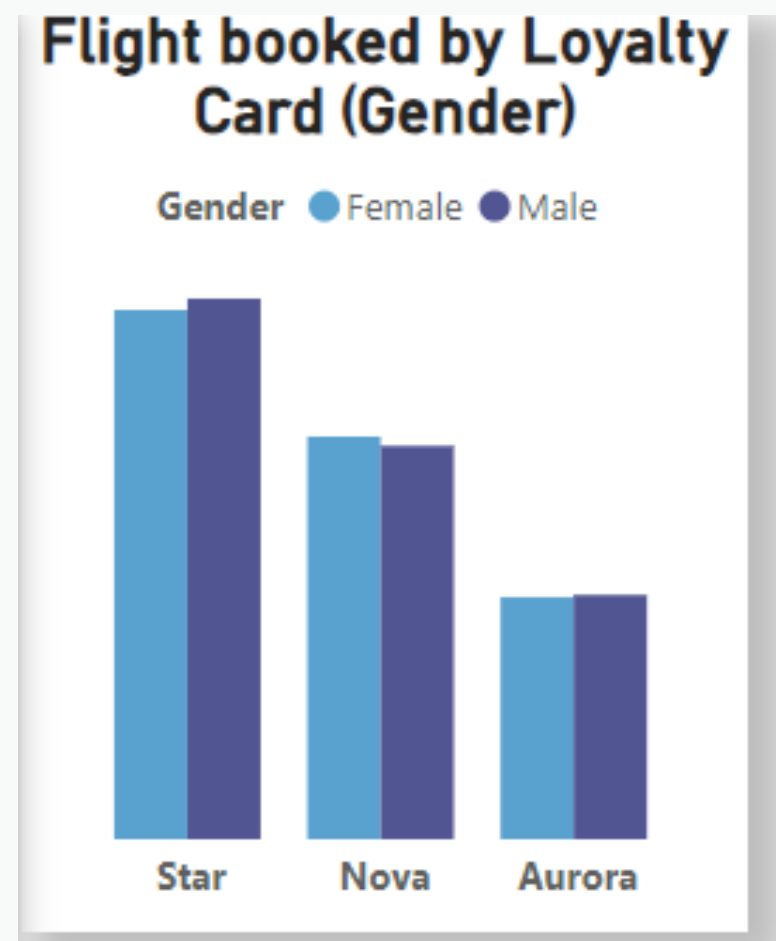
Loyalty Segmentation Analysis

Tiers Drive Behavior

- **Star Leads: Star** members consistently book the most flights and travel the farthest, regardless of gender.
- **Nova Lags:** Nova members have the fewest flights and shortest distances.
- **Aurora's Value:** Despite fewer flights, **Aurora** members have the **highest CLV Average of $10.8K**, suggesting premium spending.

Strategic Implications

- **Boost Nova Engagement:** Target promotions to increase **Nova's** flight frequency and distance traveled.
- **Maximize Aurora Value:** Focus on **retention** and **upselling** for this high-spending tier.
- **Tailor by Marital Status:** Consider offers that resonate with the **large married segment**.
- **Gender-Specific Promotions:** Explore if there's value in gender-targeted offers within each tier.

Flight booked by Loyalty Card (Gender)

Gender ● Female ● Male

Star, Nova, Aurora

Median Distance Travelled

519 — Star
480 — Aurora
450 — Nova

Avg CLV $ By Loyalty Tiers

10.8K — Aurora
8.0K — Nova
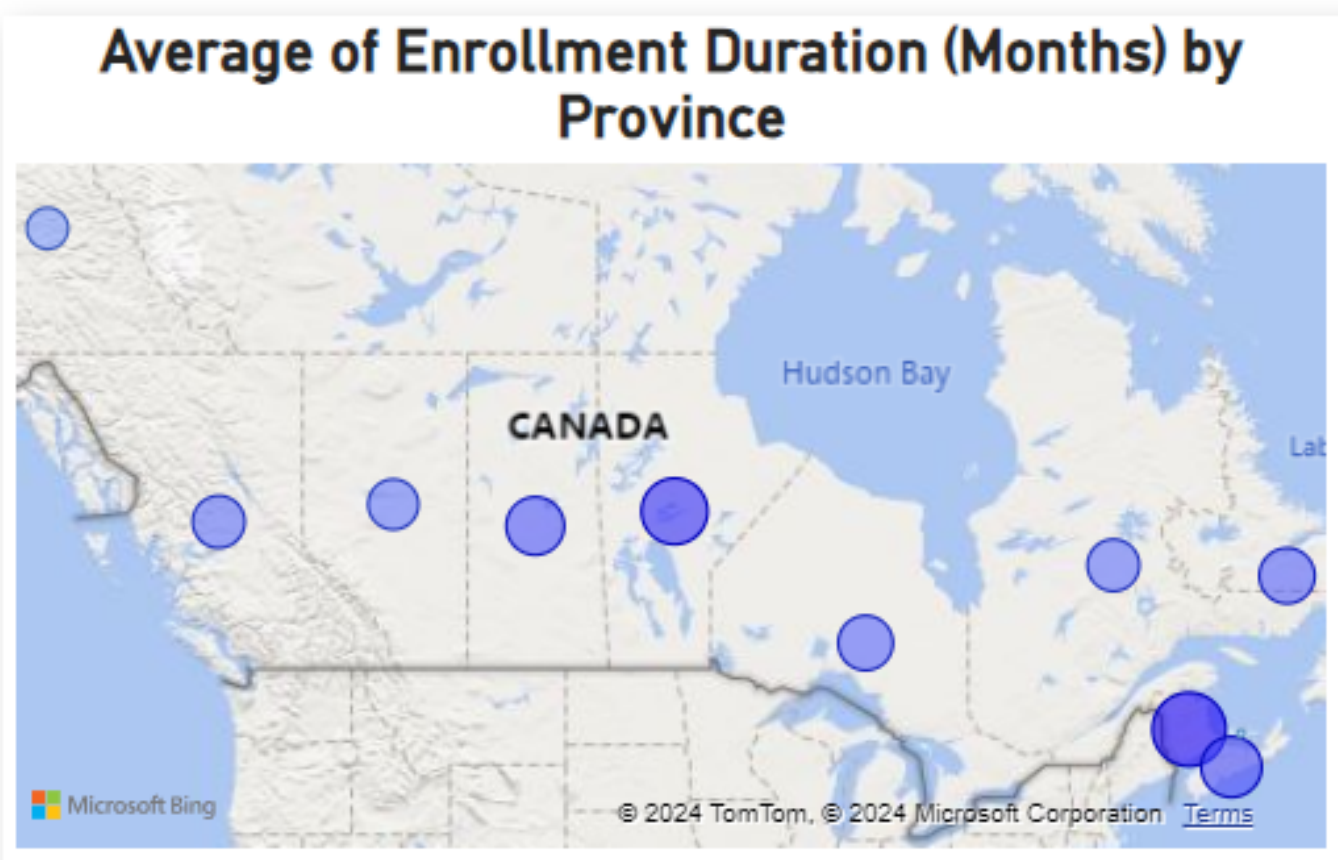6.9K — Star

Membership Trends Analysis

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Insights

- **Regional Disparity:** Enrollment duration before cancellation varies significantly across provinces. **New Brunswick** boasts the **longest average (19.21 months)**, while **Prince Edward Island** has the s**hortest (12.36 months).**
- **Short Duration Focus:** Provinces like Prince Edward Island exhibit faster member churn, highlighting a potential issue.

Implications

- **Loyalty Isn't Uniform:** Customer loyalty differs between provinces. This could be due to regional preferences, the presence of alternative travel options, or the success of localized marketing efforts.
- **Retention Needs Improvement:** The short enrollment durations in specific provinces suggest the loyalty program could be better optimized for these regions.

Province	Average of Enrollment Duration (Months)
New Brunswick	19.21
Manitoba	17.78
Nova Scotia	16.79
Saskatchewan	16.38
Newfoundland	16.00
Ontario	15.89
British Columbia	15.50
Quebec	15.48
Alberta	15.25
Yukon	14.17
Prince Edward Island	12.36

Average of Enrollment Duration (Months) by Province
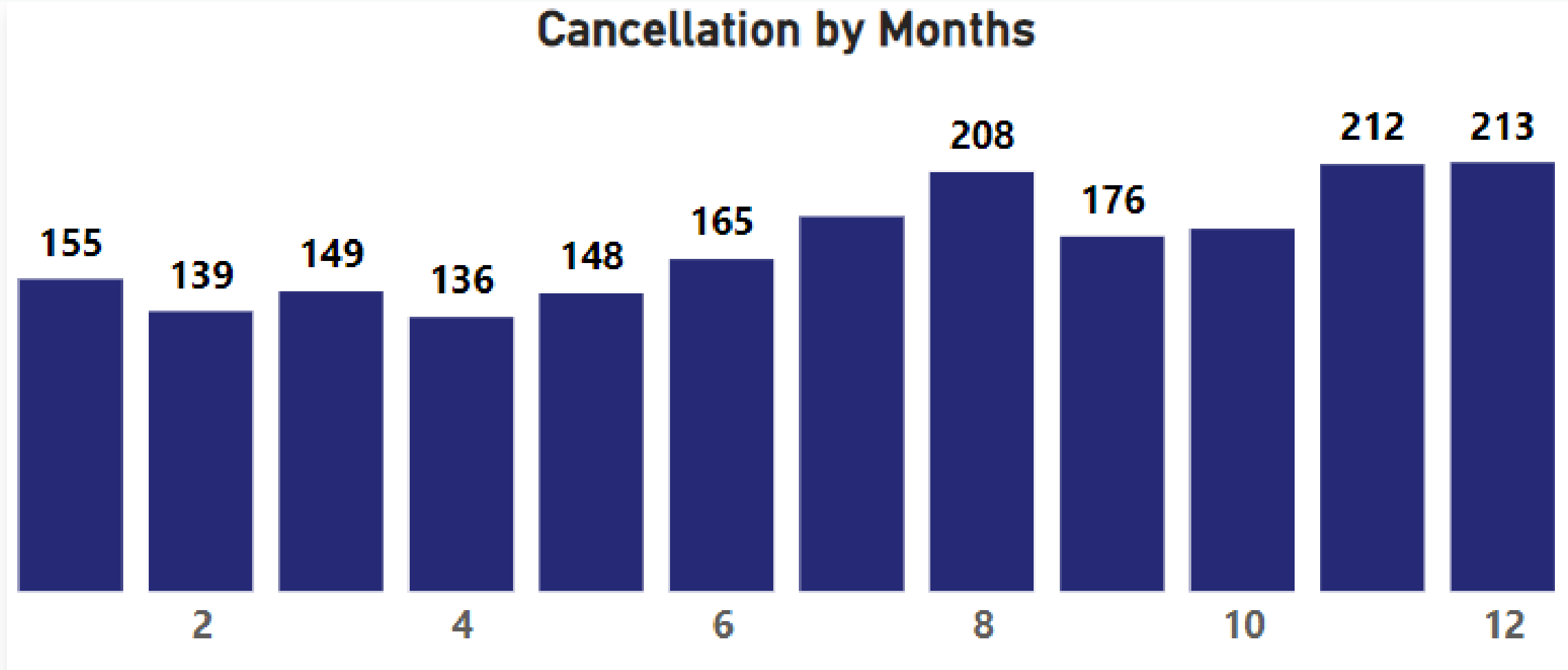
Membership Trends Analysis

Cancellation Insights: Monthly Trends

- **Seasonal Pattern:** Loyalty program cancellations exhibit a clear seasonal trend. Cancellations spike significantly in **the final quarter (October-December),** with **December having the highest number**. Conversely, cancellations are more **stable** throughout the middle of the year and reach a low point in the early months (e.g., **February**).

Strategic Implications

- **End-of-Year Evaluation:** The year-end surge in cancellations suggests members might be re-evaluating their memberships around this time and potentially opting not to renew.
- **Benefit Expiration & Holiday Budgeting:** Expiring benefits or annual fees coinciding with the holiday season could prompt financial re-evaluations and membership cuts.
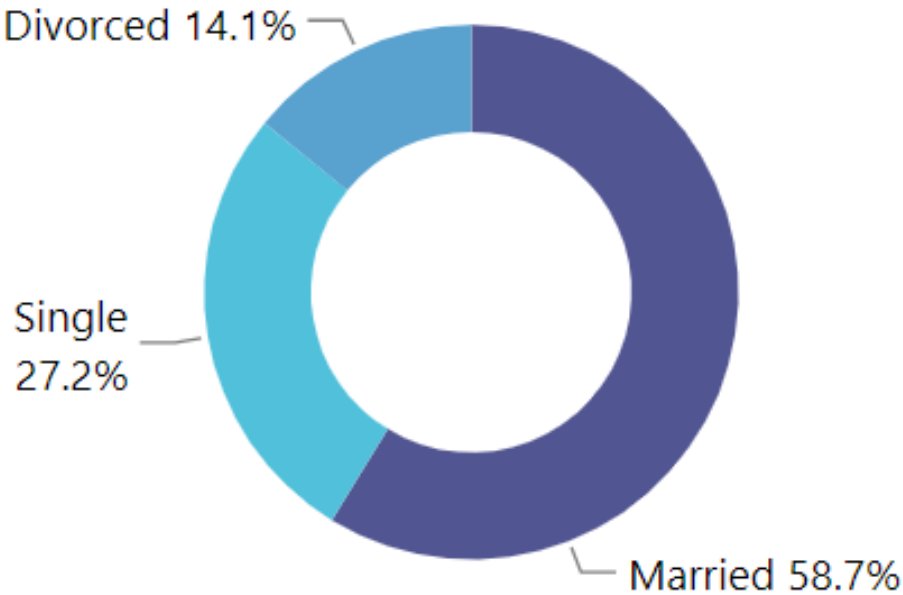
Cancellation by Months
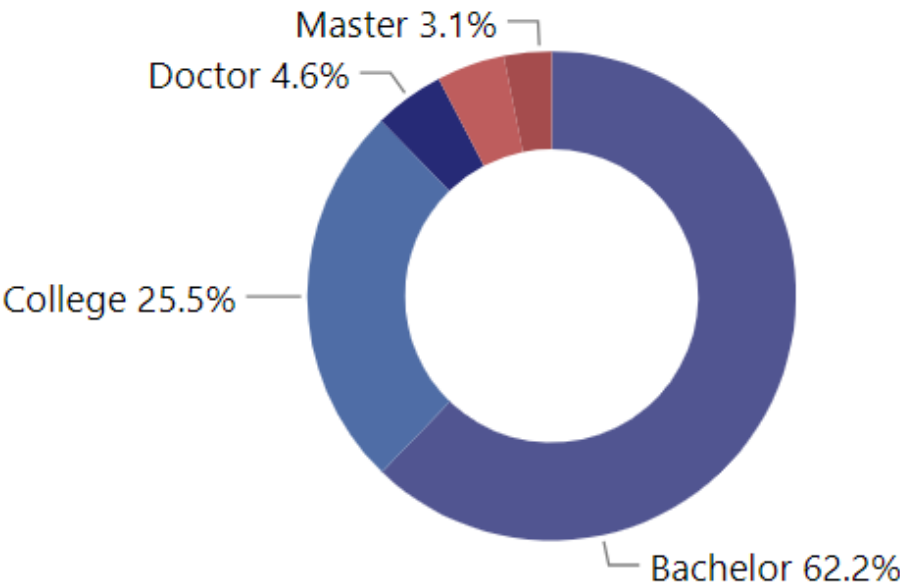
Membership Trends Analysis

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Cancellation Insights: Demographics & Card Tiers

- **Education & Cancellation: Bachelor's** degree holders have the **highest cancellation rate (62.2%).** This could be due to this group being the largest in the program or having unique travel needs that aren't being met.
- **Marital Status & Cancellation: Married members** exhibit the **highest cancellation rate (58.7%)**. This might indicate that life changes associated with marriage, such as having children or shifting travel preferences, are influencing loyalty program retention.
- **Card Tier & Enrollment Duration: Aurora** cardholders have the **shortest average enrollment duration before cancellation**. This suggests potential dissatisfaction with the program or a mismatch between the offered benefits and their expectations.
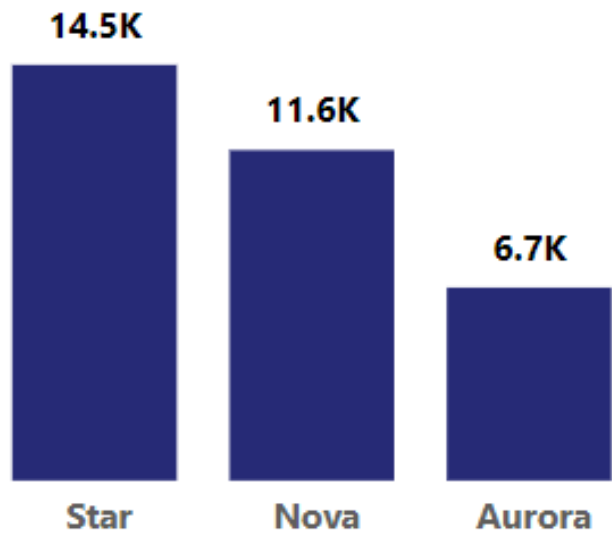

Cancellation by Marital Status

Divorced 14.1%
Single 27.2%
Married 58.7%

Cancellation by Education

Master 3.1%
Doctor 4.6%
College 25.5%
Bachelor 62.2%

Enrollment Duration by Loyalty Card

14.5K — Star
11.6K — Nova
6.7K — Aurora

Membership Trends Analysis

Strategic Implications

- **Segment-Specific Needs:** Demographics like **education** and **marital status** can influence cancellation rates. Understanding these variations allows for targeted program improvement.
- **Aurora Tier Concerns:** The short enrollment duration for **Aurora members** indicates a need to investigate reasons for their dissatisfaction and potentially improve the tier's rewards or communication.

Actions

- **Bachelor's Degree Deep Dive:** Conduct research (surveys, focus groups) to understand why **Bachelor's degree holders** cancel frequently. Tailor program offerings to address their specific travel needs and preferences.
- **Improve Aurora Tier:** Investigate reasons behind high cancellation rates in the **Aurora tier.** Consider enhancing rewards or improving communication to increase loyalty within this segment.
- **Tailor to Married Couples:** Explore offering incentives or benefits that resonate with married couples, potentially focusing on family travel or couple-oriented rewards.

Further Analysis

- **Seek Direct Feedback:** Survey canceling members to understand their reasons for leaving.
- **Track Benefits Usage:** Analyze which rewards are popular with different demographics to identify mismatches between what's offered and what members value.
- **Monitor Aurora Activity:** Track point redemption and engagement patterns within the Aurora tier to pinpoint areas for improvement and boost loyalty.

Recommendations

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1. **Address Seasonality:**
   - Boost capacity & marketing during peak seasons **(Spring Break, Summer, Holidays).**
   - Introduce **off-season incentives** to smooth out demand and counter lulls.
2. **Target Loyalty Improvements:**
   - Investigate **Aurora tier churn.** Adjust benefits to better match expectations.
   - Focus promotions on **small groups** for higher returns on investment.
3. **Tailor by Demographics:**
   - Craft rewards & communication for **Bachelor's & Married segments**, the largest groups.
   - Deep dive into why Bachelor's degree holders cancel frequently.
4. **Geographic Strategy:**
   - Strengthen **Ontario's** presence with targeted offers and route expansions.
   - Explore growth potential in the **East** and **North** with new routes or region-specific perks.
5. **Data-Driven Decisions:**
   - Use **predictive modeling** to forecast point liability and target campaigns.
   - Benchmark your cancellation rates and CLV against industry standards.
6. **Prioritize Feedback & Analysis:**
   - Survey members, especially those who cancel, to better understand their choices.
   - Track reward usage and engagement by demographics to tailor your program effectively.

RECOMMEND

Conclusion

By understanding seasonal travel trends, demographic preferences, and regional variations, FlyingWhale Airline has the power to significantly improve its loyalty program. Targeted strategies, informed by data-driven insights, will create a more personalized travel experience, boosting customer satisfaction and strengthening long-term loyalty.
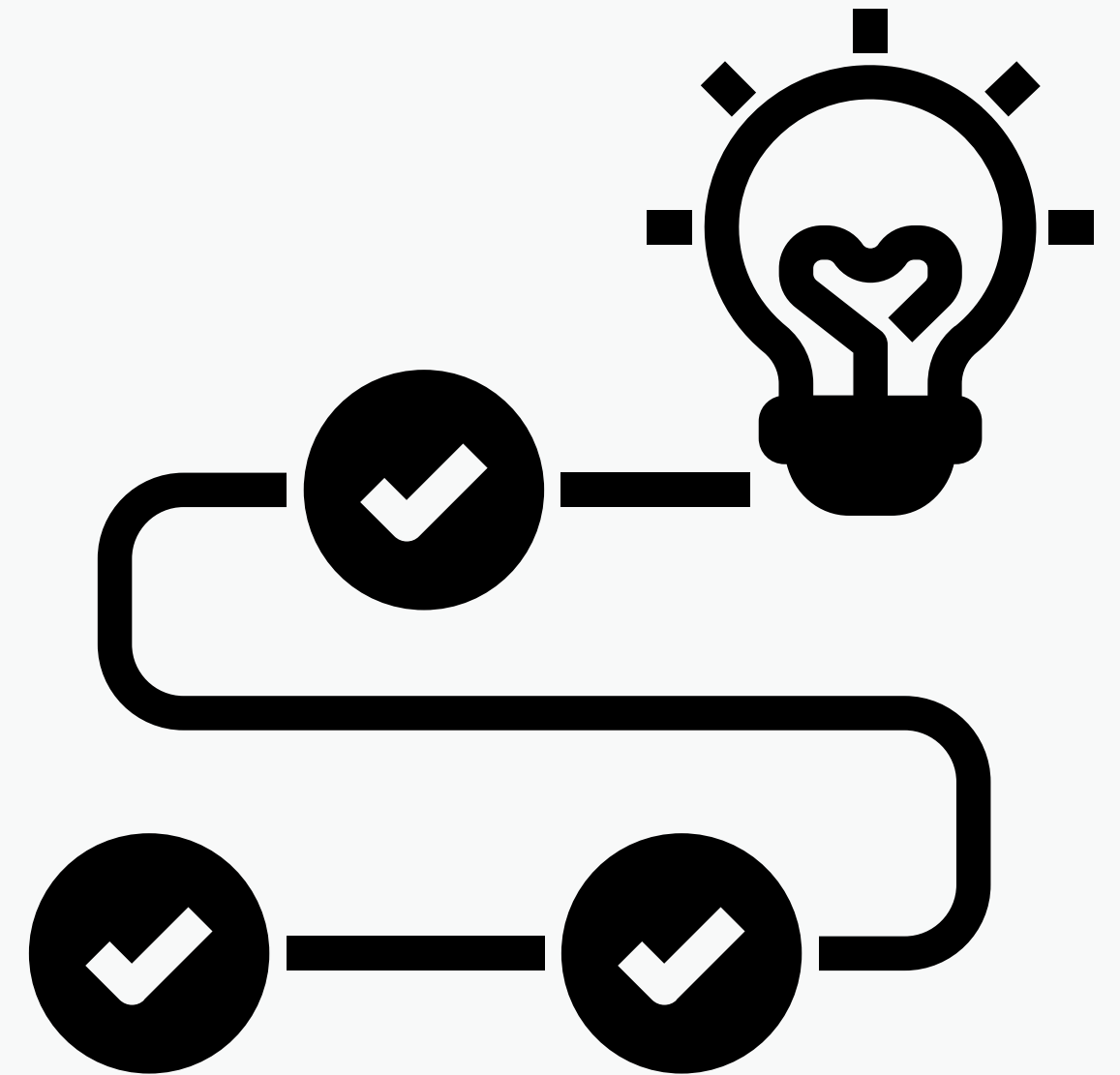
Thank You!

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For reviewing this report...