

Telecom Churn Analysis Report

1. Introduction

The purpose of this report is to analyze customer churn in a telecom company and identify key factors influencing churn. We have developed four dashboards to provide a comprehensive view of churn behavior, customer service interactions, revenue performance, and usage patterns. This report outlines insights derived from these dashboards and suggests actionable recommendations for reducing churn and enhancing customer retention.

Dashboards Included:

1. **Churn Overview Dashboard**
 2. **Customer Service Calls Impact Dashboard**
 3. **Revenue Analysis Dashboard**
 4. **Usage Pattern Analysis Dashboard**
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2. Churn Overview Analysis

Dashboard Summary

The Churn Overview Dashboard provides a high-level view of customer churn metrics, including:

- **Total Customers:** 2,666
- **Churned Customers:** 388
- **Churn Rate:** 15%

Visual Insights

1. **Churn Status Breakdown:**
 - A pie chart reveals that 14.55% of customers have churned, while 85.45% remain loyal.
2. **Churned Customers by State:**
 - The bar chart highlights states with the highest number of churned customers. States such as TX, MD, and NJ show significant churn.

Key Insight

States with higher churn rates might require targeted customer engagement strategies, such as personalized offers or loyalty programs.

3. Customer Service Calls Impact Analysis

Dashboard Summary

The Customer Service Calls Impact Dashboard explores the relationship between customer service calls and churn.

Visual Insights

1. **Average Customer Service Calls by Churn Status:**
 - Customers who churned made an average of 2 calls, whereas non-churned customers made only 1 call.
2. **Churn Rate Heatmap by State and Area Code:**
 - The heatmap provides a detailed view of churn rates across different states and area codes. States such as MI (55%) and NJ (46%) show the highest churn rates.

Key Insight

High churn among customers making frequent customer service calls suggests dissatisfaction with issue resolution. Improving customer service quality and reducing wait times could help mitigate churn.

4. Revenue Analysis

Dashboard Summary

The Revenue Analysis Dashboard focuses on revenue performance across different segments.

Visual Insights

1. **Total Revenue by Time of Day:**
 - Daytime usage generates the highest revenue (\$81,346), followed by evening (\$45,410) and night (\$24,134).
2. **Revenue by International Plan:**
 - Customers without an international plan contribute significantly more revenue than those with an international plan.
3. **Top 5 States by Revenue:**
 - The top revenue-generating states are WV, MN, VA, OH, and WY.

Key Insight

Targeting high-revenue customers with premium plans or value-added services could increase profitability.

5. Usage Pattern Analysis

Dashboard Summary

The Usage Pattern Analysis Dashboard examines customer usage patterns across different time periods and call types.

Visual Insights

- Average Usage by Time of Day:**
 - Daytime Usage: 179 minutes
 - Evening Usage: 200 minutes
 - Night Usage: 201 minutes
- Usage in Minutes by Time of Day:**
 - The bar chart shows that night usage is higher than other periods, indicating peak demand during the night.
- Usage Breakdown by Area Code:**
 - Area code 408 has relatively balanced usage across all periods, with notable spikes in evening and night usage.
 - Area code 415 shows higher evening and night usage compared to daytime.
 - Area code 510 exhibits a similar pattern to 415.

Key Insight

Understanding peak usage periods can help optimize network performance. Offering flexible plans tailored to high-usage periods, such as night-time, may enhance customer satisfaction and reduce strain on network resources.

6. Insights & Recommendations

Key Insights

- Churn Rate:**
 - The overall churn rate is 15%. High-churn states and dissatisfied customers with frequent service calls require attention.
- Customer Service Impact:**
 - High churn among customers with frequent customer service interactions indicates a need to improve issue resolution and support quality.

3. **Revenue Drivers:**
 - Daytime usage and customers without international plans are the primary revenue contributors.
4. **Usage Patterns:**
 - Peak usage occurs during the night, presenting an opportunity for targeted offers and optimized resource allocation.

Recommendations

1. **Enhance Customer Service:**
 - Invest in staff training and AI-driven support tools to improve issue resolution.
 2. **Targeted Retention Campaigns:**
 - Develop personalized retention campaigns for high-churn states.
 3. **Premium Plan Offerings:**
 - Introduce premium plans or add-on services tailored to high-revenue customers.
 4. **Flexible Usage Plans:**
 - Offer flexible plans targeting peak usage periods to improve customer satisfaction and retention.
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7. Conclusion

This analysis highlights critical areas affecting customer churn, revenue generation, and usage patterns. By addressing the identified issues and implementing the recommended strategies, the telecom company can reduce churn, enhance customer satisfaction, and boost overall profitability.

Appendix

1. **Data Source:**
 - MicroStrategy Dashboards
 2. **Developed Dashboards:**
 - Churn Overview Dashboard
 - Customer Service Calls Impact Dashboard
 - Revenue Analysis Dashboard
 - Usage Pattern Analysis Dashboard
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