Predicting Customer Churn in Telecom Industry using Tableau & SQL

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Introduction

In today's highly competitive telecom industry, customer retention has become a critical priority. With numerous options available, customers often switch providers due to dissatisfaction with service quality, pricing, or other factors. Predicting customer churn—identifying which customers are likely to leave the service—is essential for telecom companies to proactively address issues and retain valuable customers.

The primary objective of this project is to predict customer churn in the telecom industry using Tableau and SQL. **Customer Retention**: Identifying at-risk customers and implementing targeted retention strategies.

1. **Marketing Campaigns**: Tailoring marketing efforts towards customers who are more likely to churn.
2. **Service Improvement**: Analyzing churn patterns to enhance service offerings and customer support.
3. **Revenue Optimization**: Reducing churn rates to maintain a steady revenue stream.
4. **Customer Segmentation**: Segmenting customers based on churn probability to offer personalized experiences.

This project follows a structured approach, starting with data collection using SQL, followed by data preprocessing, exploratory data analysis (EDA) using Tableau, feature engineering, and finally, the creation of interactive dashboards for visualization and reporting.

The insights derived from this project will provide a detailed understanding of customer behavior, identify key factors influencing churn, and offer data-driven recommendations to reduce churn, ultimately contributing to revenue optimization and improved customer satisfaction.

Data Collection and Preprocessing

Data Collection

- **Data Source**: The data used for this project was extracted from a telecom database that includes customer information, usage statistics, billing details, and customer service interactions. The data was queried using SQL, focusing on attributes relevant to predicting customer churn, such as customer demographics, service usage patterns, and churn indicators.
- **SQL Queries**: The SQL queries were designed to extract specific subsets of data that would provide insights into customer behavior and churn. For example, data was extracted to include customer IDs, total revenue, long-distance charges, churn status, and reasons for churn, among other factors.

Data Preprocessing

- **Handling Missing Values**: Missing values were identified and handled appropriately. For instance, certain missing data points were replaced with the mean or median values of the respective fields, while others were flagged as 'Null' and treated as separate categories in the analysis.
- **Data Aggregation**: The data was aggregated where necessary, for example, summing up monthly charges to get total charges or categorizing churn reasons into broader categories like 'Competitor' or 'Dissatisfaction' for a more streamlined analysis.

Summary

- The preprocessing steps ensured that the data was clean, consistent, and ready for in-depth analysis. By addressing issues like missing values, and varying scales, the data was made suitable for generating reliable insights in the subsequent stages of the project.

# Exploratory Data Analysis (EDA)

Overview:

- The Exploratory Data Analysis (EDA) phase involved using Tableau to visualize and understand the patterns, trends, and relationships in the data. The primary goal was to uncover insights that could help in predicting customer churn and identifying the factors most strongly associated with it.

Key Insights:

1. **Customer Distribution by Churn**:
   - The data was first analyzed to understand the distribution of churned vs. non-churned customers. This helped in understanding the overall churn rate and the proportion of customers at risk.
2. **Revenue Analysis**:
   - Revenue contributions were analyzed by segmenting customers into churned and stayed categories. It was observed that a large portion of the revenue comes from customers who did not churn, reinforcing the importance of retention strategies.
3. **Usage Patterns**:
   - Analysis of usage patterns, such as long-distance charges and total monthly usage, showed that customers with lower usage tended to churn more frequently, suggesting a correlation between usage intensity and churn risk.
4. **Churn Reasons**:
   - The analysis of churn reasons revealed that competition was the leading cause, followed by dissatisfaction and poor customer service. This provided actionable insights into where the company should focus its retention effort
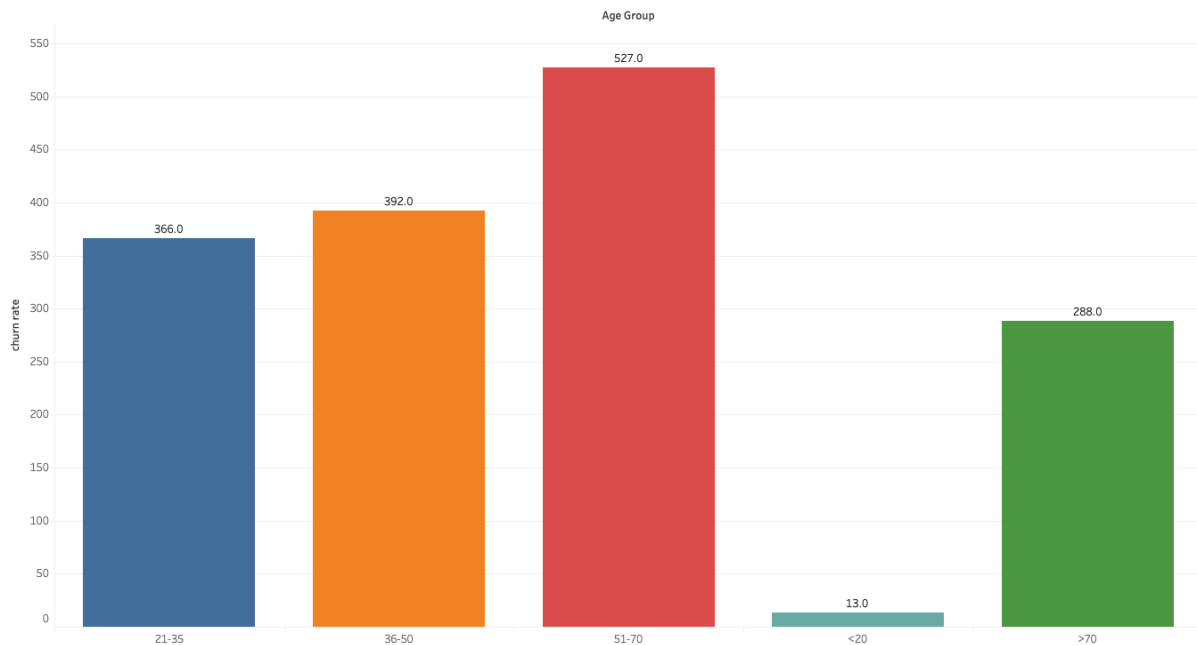
Churn by Age Group

Churn by Age Group

The analysis of churn by age group reveals distinct patterns that can inform targeted retention strategies. The age group **51-70** exhibits the highest churn, with **527** customers leaving the service. This is followed by the **36-50** age group, with **392** churned customers, and the **21-35** age group, which has **366** churned customers.

Interestingly, customers aged **over 70** have a significantly lower churn rate, with only **288** churned customers, while the **under 20** age group shows the least churn, with just **13** customers.

These findings suggest that middle-aged customers (particularly those between 51 and 70) are the most at risk of leaving the service, which may indicate that this demographic has specific needs or expectations that are not being fully met. On the other hand, the low churn rate among younger and older customers might indicate higher satisfaction levels or less competition for these age groups.

By understanding these trends, telecom companies can tailor their retention strategies to focus on the middle-aged demographic, possibly by enhancing service offerings, providing better customer support, or offering targeted promotions that appeal to the needs of these customers.
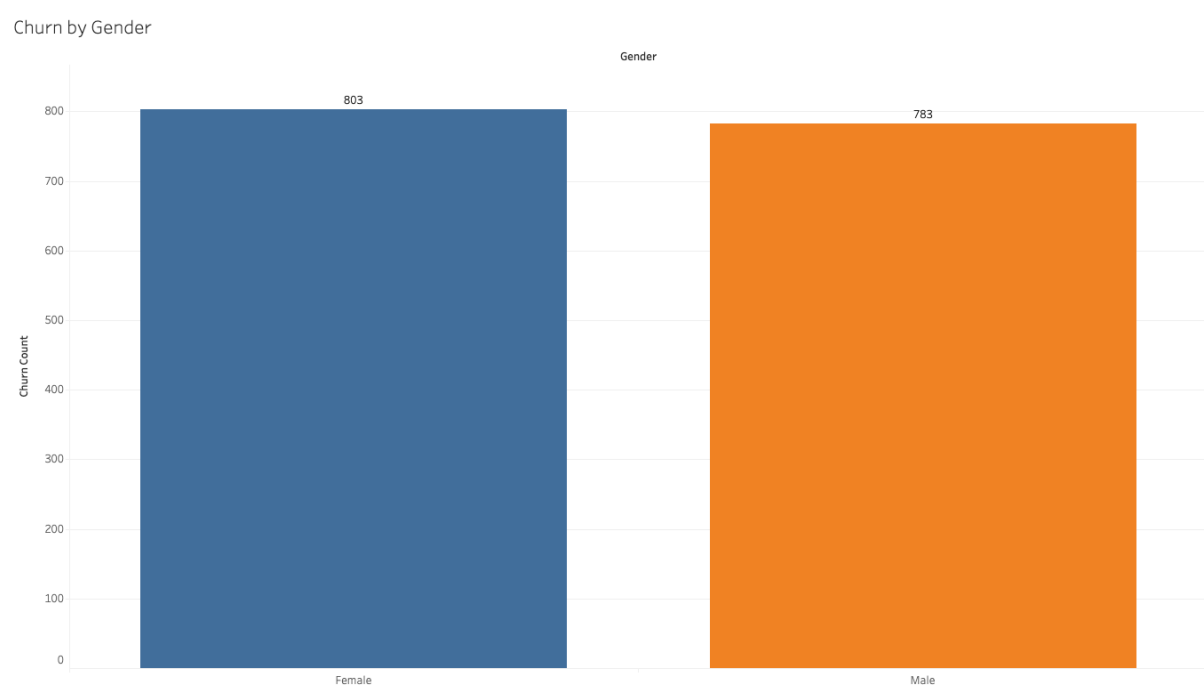
Churn by Gender

Churn by Gender

The churn analysis by gender reveals that the difference between male and female customers who have left the service is minimal. Specifically, **803** female customers have churned, compared to **783** male customers.

This near-equal distribution suggests that gender is not a significant factor in predicting churn within this telecom company. Both male and female customers are equally likely to leave the service, indicating that any customer retention strategies should not heavily focus on gender-based differences.

Instead, it would be more effective to consider other demographic or behavioral factors that may contribute to churn, such as age, tenure, or product usage, to develop more targeted and impactful retention strategies.
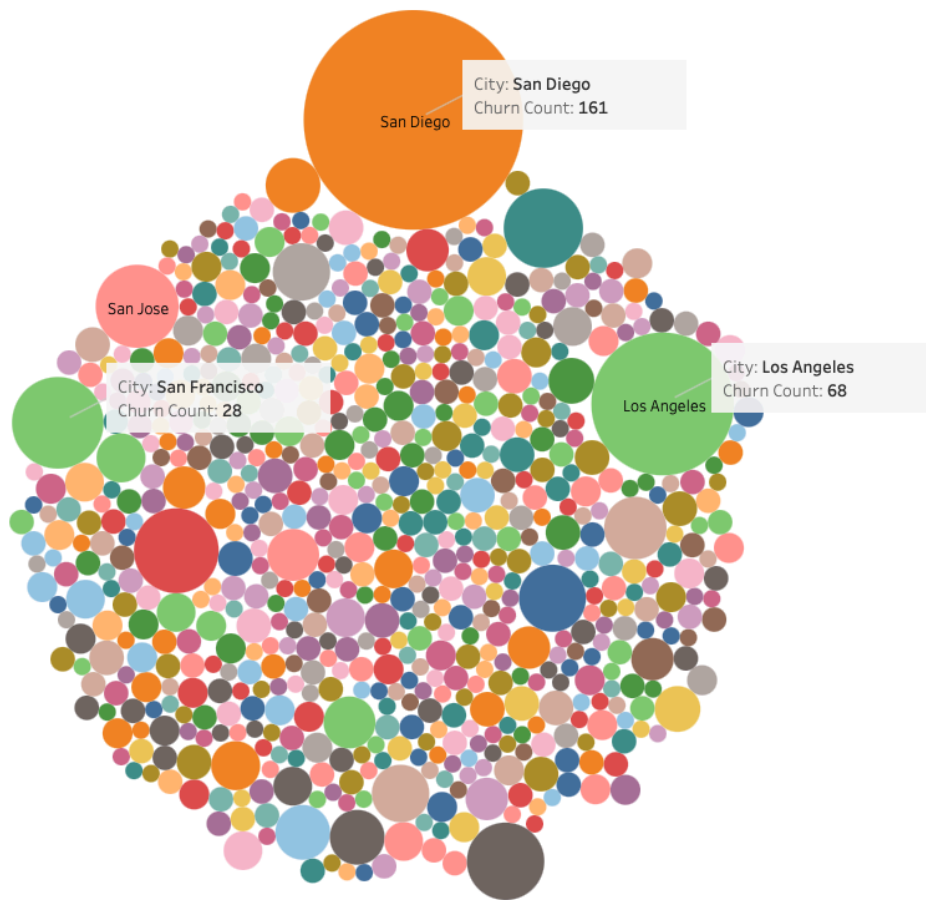
Churn by Marital
Status

579
Yes
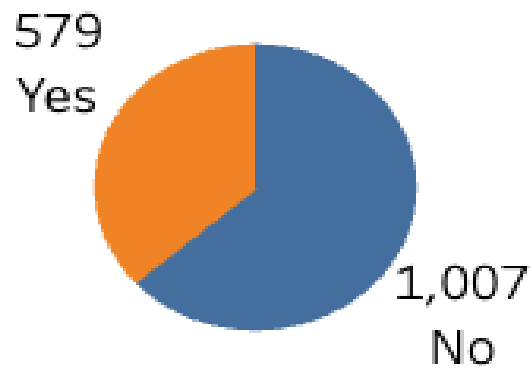
1,007
No

Churn by Marital Status

The analysis of churn by marital status shows a significant difference between married and unmarried customers. A total of **1,007** unmarried customers have churned, compared to **579** married customers.

This disparity suggests that unmarried customers are more likely to leave the service than their married counterparts. The reasons behind this trend could vary, but it might be influenced by differences in lifestyle, financial priorities, or service needs between these two groups.

For telecom companies, this insight indicates an opportunity to develop targeted retention strategies for unmarried customers, who appear to be at a higher risk of churn. Offering personalized services, flexible plans, or exclusive promotions might help reduce churn in this demographic. Additionally, understanding the specific reasons why unmarried customers are more likely to churn could further enhance retention efforts.

Churn by Location

City: **San Diego**
Churn Count: **161**

San Diego

City: **San Francisco**
Churn Count: **28**

San Jose

City: **Los Angeles**
Churn Count: **68**

Los Angeles

Churn by Location

The churn analysis by location highlights that **San Diego** has the highest number of churned customers, with **161** individuals leaving the service. **Los Angeles** follows with **68** churned customers, while **San Francisco** has a relatively low churn rate, with **28** customers leaving. Other cities and locations have even fewer churned customers.

Insights:

This geographical variation in churn rates suggests that customers in San Diego are facing issues or experiencing dissatisfaction at a higher rate than those in other cities. The reasons behind this trend could be due to factors such as service coverage, competition, or local market conditions. For telecom companies, these findings underline the importance of region-specific strategies. Addressing the challenges unique to San Diego could involve improving service quality, enhancing customer support, or offering competitive pricing and promotions specifically for customers in this area. By doing so, the company can work towards reducing churn rates in high-risk locations and maintaining a stronger customer base across all regions.

Churn by Payment types

Bank Withdrawal
1,179

Credit Card
318
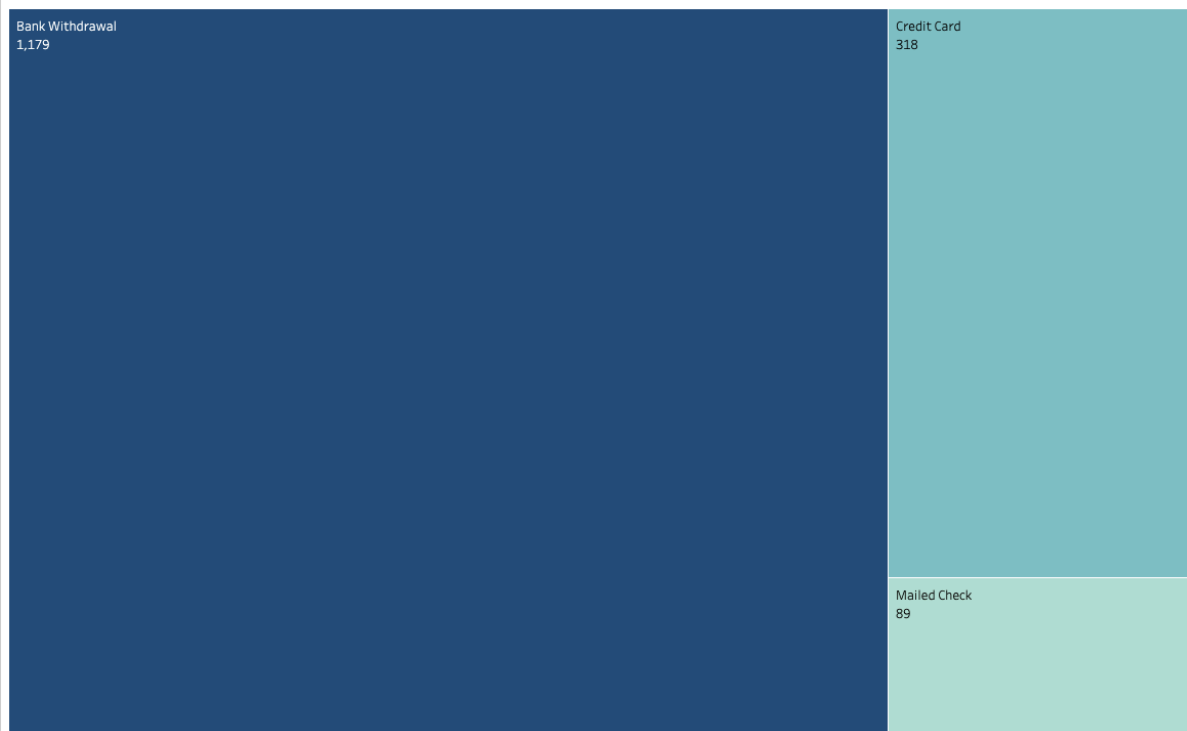
Mailed Check
89

Churn by Payment Status

The churn analysis by payment status reveals the following:

- **Bank Withdrawal**: 1,179 churned customers
- **Credit Card**: 318 churned customers
- **Mailed Check**: 89 churned customers

Insights:

The data indicates that customers using bank withdrawal as their payment method experience the highest churn rate, with 1,179 customers leaving the service. This is significantly higher compared to customers using credit cards, who have a churn rate of 318, and those using mailed checks, who have the lowest churn rate with only 89 customers.

This stark contrast suggests that the payment method might play a significant role in customer retention. The high churn rate among bank withdrawal users could be due to issues such as payment processing difficulties, higher fees, or customer dissatisfaction with the payment method.

- **Bank Withdrawal Customers**: Investigate and address potential issues related to the bank withdrawal payment method. Consider improving the payment processing experience, reducing associated fees, or providing alternative solutions to enhance customer satisfaction and reduce churn.

- **Credit Card and Mailed Check Customers**: While churn rates are lower for these payment methods, continue to ensure a positive payment experience. Monitoring customer feedback and addressing any concerns promptly can help maintain satisfaction and prevent an increase in churn rates.

By focusing on improving the payment experience for bank withdrawal users and maintaining high standards for other payment methods, the company can work towards reducing overall churn and enhancing customer retention.

Churn by Monthly Charges
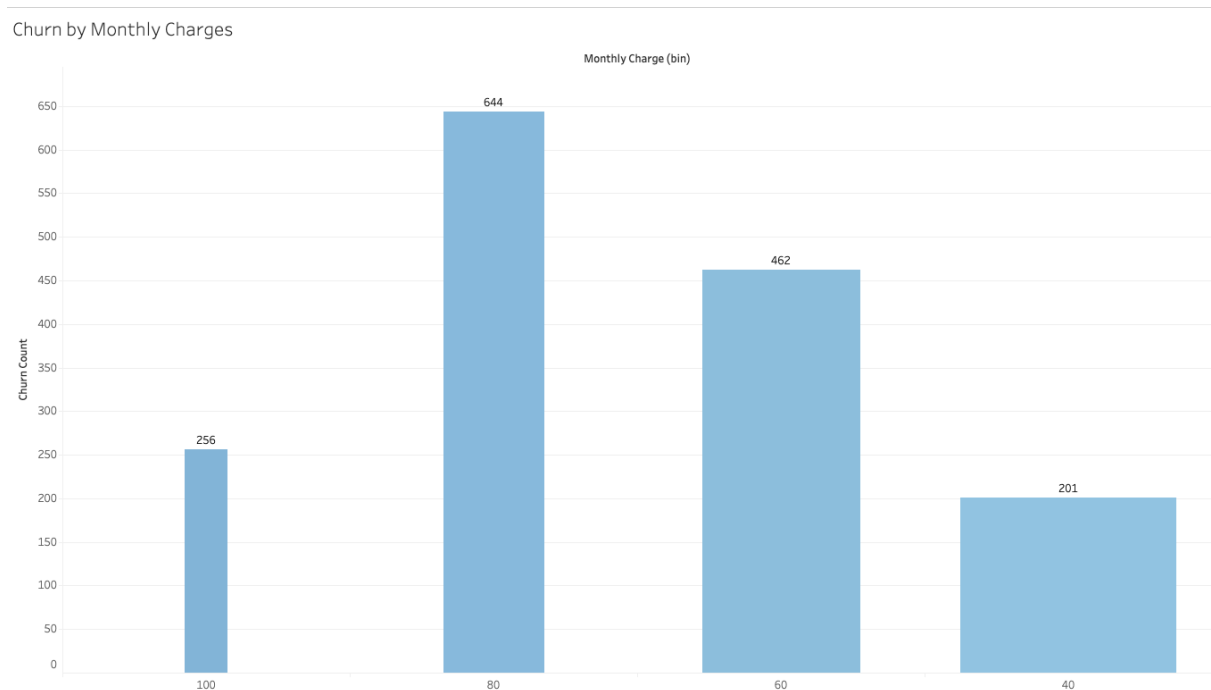
Churn by Monthly Charges

The analysis of churn by monthly charges reveals the following:

- **Average Monthly Charge $40**: 201 churned customers
- **Average Monthly Charge $60**: 462 churned customers
- **Average Monthly Charge $80**: 644 churned customers
- **Average Monthly Charge $100**: 256 churned customers

Insights:

The data demonstrates a clear trend in churn rates based on monthly charges. Customers with an average monthly charge of $80 exhibit the highest churn rate, with 644 customers leaving the service. This is followed by customers with an average monthly charge of $60, who have 462 churned customers. Interestingly, the churn rate decreases for customers with a monthly charge of $100, where 256 customers have churned, and is lowest for those with an average charge of $40, with 201 churned customers.

This pattern suggests that customers who pay higher monthly charges are more likely to churn, despite the fact that higher charges might be associated with more premium services or features. It may indicate dissatisfaction with the value received for the cost, or a potential mismatch between service expectations and the charges.

- **Customers with $80 Charges**: Explore reasons for the higher churn rate among customers with an average charge of $80. Consider assessing the value proposition of this pricing tier and implementing strategies to enhance perceived value, such as offering additional features, improving service quality, or revising pricing strategies.
- **Higher and Lower Charge Tiers**: While customers with $100 and $40 charges have relatively lower churn rates, continue to ensure that these tiers offer satisfactory value. For higher charge tiers, ensure that customers receive premium service commensurate with the cost. For lower charge tiers, ensure that customers feel they are receiving good value for their money.

By understanding and addressing the factors contributing to churn at different pricing levels, the company can better align its pricing strategy with customer expectations and reduce overall churn rates.
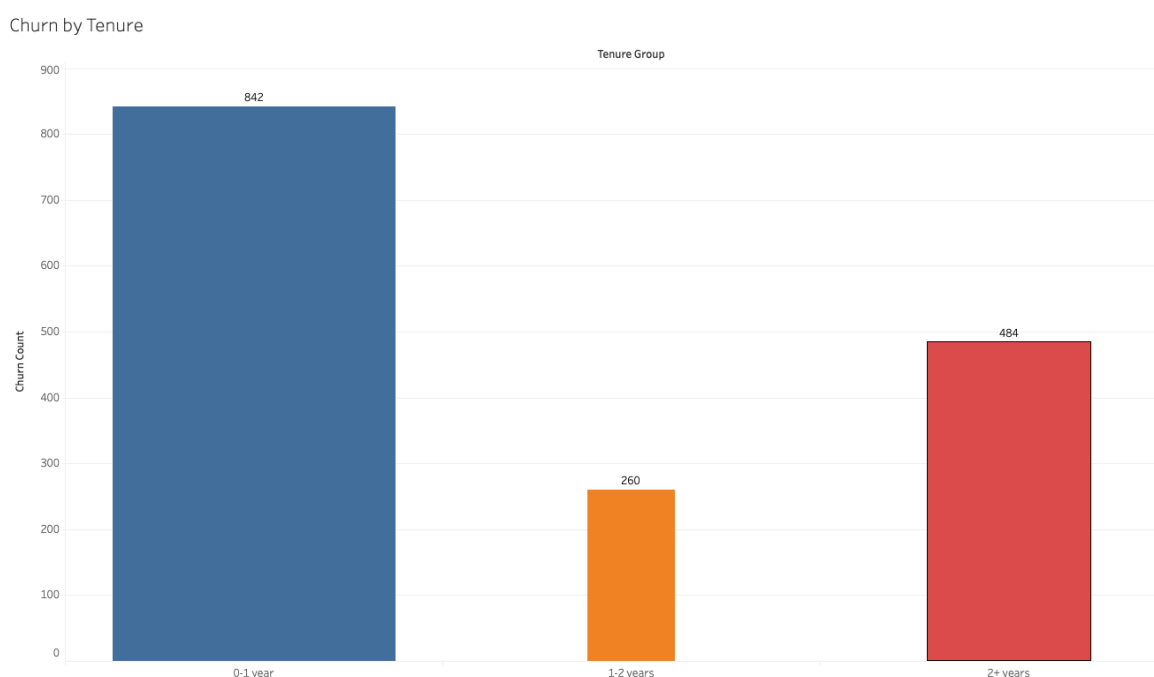
Churn by Tenure

The analysis of churn by tenure reveals the following:

- **Tenure 0-1 Year**: 842 churned customers
- **Tenure 1-2 Years**: 260 churned customers
- **Tenure 2+ Years**: 484 churned customers

Insights:

The data indicates a clear relationship between tenure and churn rates. Customers with a tenure of 0-1 year exhibit the highest churn rate, with 842 customers leaving the service. This is significantly higher compared to the 260 churned customers with a tenure of 1-2 years and 484 churned customers with a tenure of 2+ years.

The high churn rate among new customers (0-1 year) suggests that early-stage customers are more likely to leave the service, potentially due to dissatisfaction with their initial experience, unmet expectations, or competitive offers. On the other hand, while churn remains present among long-term customers (2+ years), it is lower compared to newer customers.

- **New Customers (0-1 Year)**: Focus on improving the onboarding process and initial customer experience to reduce early churn. Implement strategies such as personalized welcome offers, enhanced customer support, and engagement initiatives to better meet the needs of new customers and increase their likelihood of staying beyond the initial year.
- **Customers with 1-2 Years and 2+ Years Tenure**: While churn is lower in these groups, continue to monitor their satisfaction levels and address any emerging issues. Offering loyalty rewards, regular service updates, or tailored promotions can help maintain their engagement and further reduce the likelihood of churn.

By addressing the specific needs and experiences of customers based on their tenure, the company can work towards improving customer retention across all stages of the customer lifecycle.

Revenue by Churned and Stayed
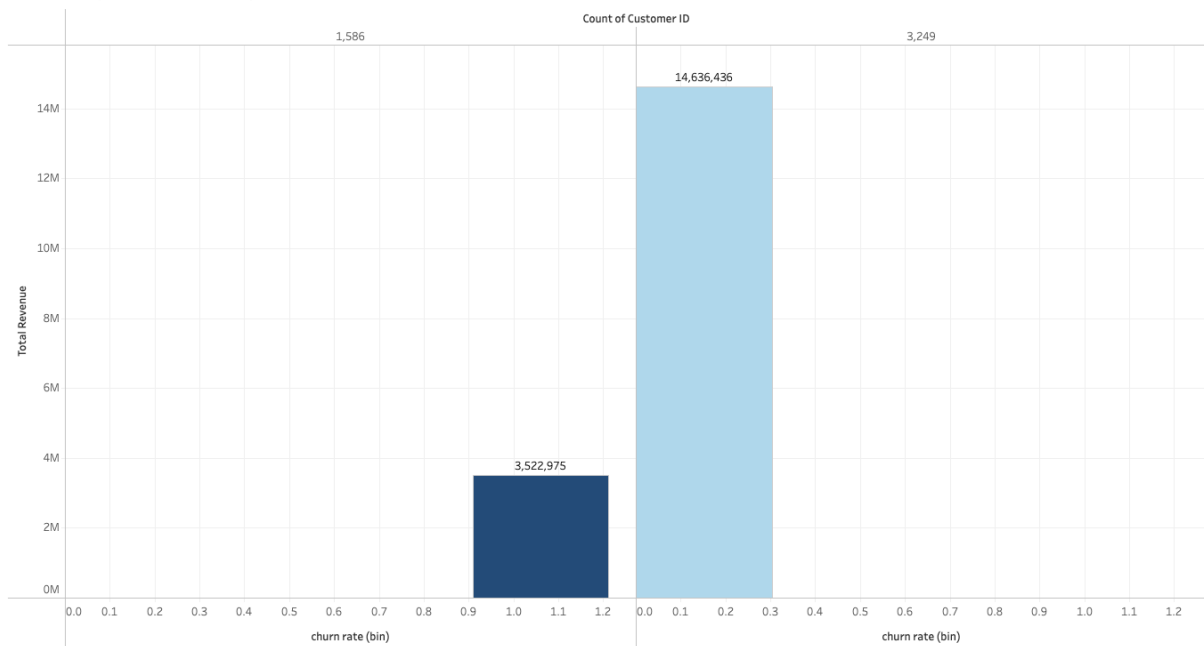
Churn by Revenue Impact

The analysis of revenue impact based on customer churn reveals the following:

- **Total Revenue from Churned Customers**: $3,522,975
- **Total Revenue from Stayed Customers**: $14,636,436

Insights:

The data highlights a significant disparity in revenue between churned and retained customers. The total revenue lost from churned customers amounts to $3,522,975, while the revenue generated from customers who have stayed with the service is substantially higher at $14,636,436.

This substantial difference underscores the financial impact of customer churn on the company. Churned customers represent a considerable loss in revenue, which emphasizes the importance of retaining customers to maintain a stable and growing revenue stream.

The revenue from retained customers is significantly higher, indicating the value of keeping customers long-term. This reinforces the need for effective retention strategies, as each retained customer contributes substantially more to the company's revenue compared to those who churn.

- **Enhance Retention Strategies**: Develop and implement strategies aimed at reducing churn, such as personalized retention offers, improved customer support, and loyalty programs. Focus on addressing the factors contributing to customer dissatisfaction and leveraging data to predict and prevent churn.

- **Revenue Optimization**: Analyze the factors that contribute to higher revenue from retained customers and replicate successful strategies across the customer base. Prioritize retention efforts for high-value customers to maximize revenue and reduce the financial impact of churn.

By focusing on reducing churn and enhancing customer satisfaction, the company can work towards minimizing revenue losses and optimizing its overall financial performance.
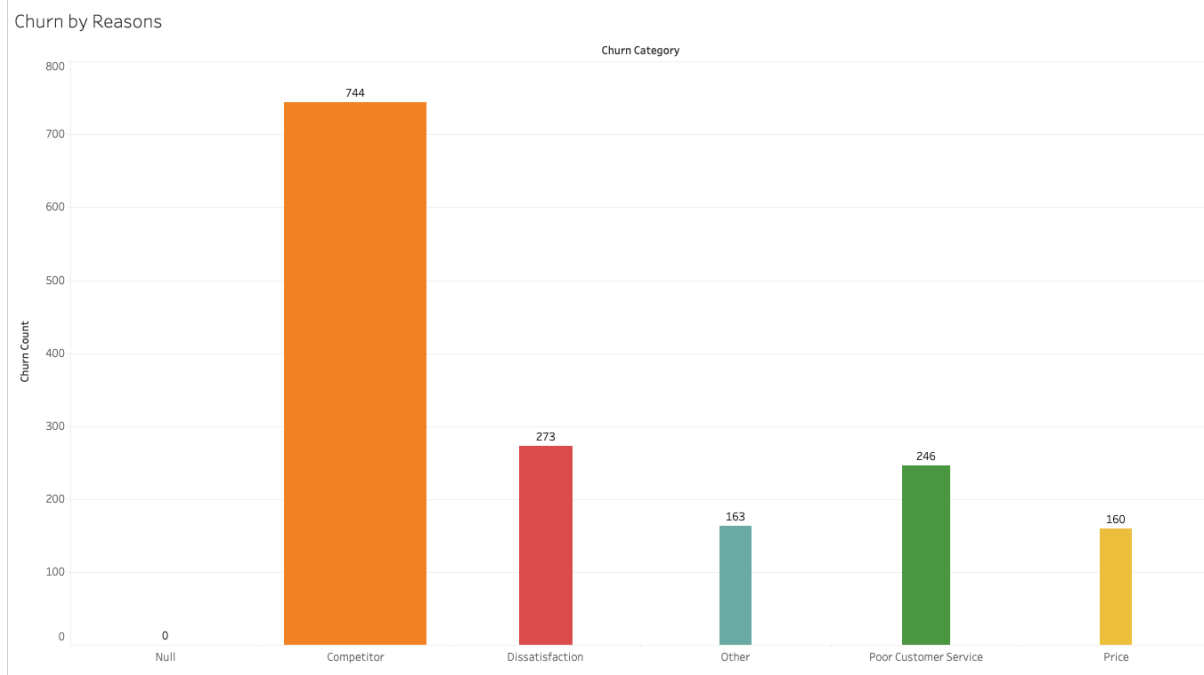
Churn by Reason

The analysis of churn reasons reveals the following distribution:

- **Competitor**: 744 churned customers
- **Price**: 160 churned customers
- **Poor Customer Service**: 246 churned customers
- **Others**: 163 churned customers
- **Dissatisfaction**: 273 churned customers

Insights:

The data indicates that the predominant reason for customer churn is "Competitor," with 744 customers citing this as their reason for leaving. This suggests that competitive offers or better services from other providers are a major factor driving customers away.

Following "Competitor," the reasons for churn include "Dissatisfaction" with 273 customers, "Poor Customer Service" with 246 customers, "Price" with 160 customers, and "Others" with 163 customers. While "Competitor" and "Dissatisfaction" are the leading reasons, issues related to customer service and pricing also significantly contribute to churn.

- **Competitor**: Focus on competitive analysis to understand what other providers are offering. Develop strategies to differentiate your services, such as enhancing service quality, offering unique features, or creating competitive pricing plans to retain customers and counteract competitor influences.
- **Dissatisfaction**: Conduct in-depth research to identify specific aspects causing dissatisfaction among customers. Improve service quality, address customer feedback, and implement changes that enhance the overall customer experience.
- **Poor Customer Service**: Strengthen customer support by training staff, improving response times, and ensuring consistent and high-quality service. Addressing customer service issues can significantly impact retention rates.
- **Price**: Review and optimize pricing strategies to ensure they are competitive while still providing value. Consider flexible pricing options or promotions to address concerns related to pricing.

By addressing the key reasons for churn, the company can develop targeted strategies to improve customer retention and reduce the factors driving customers to competitors.

Churn by Total Long Distance Charges
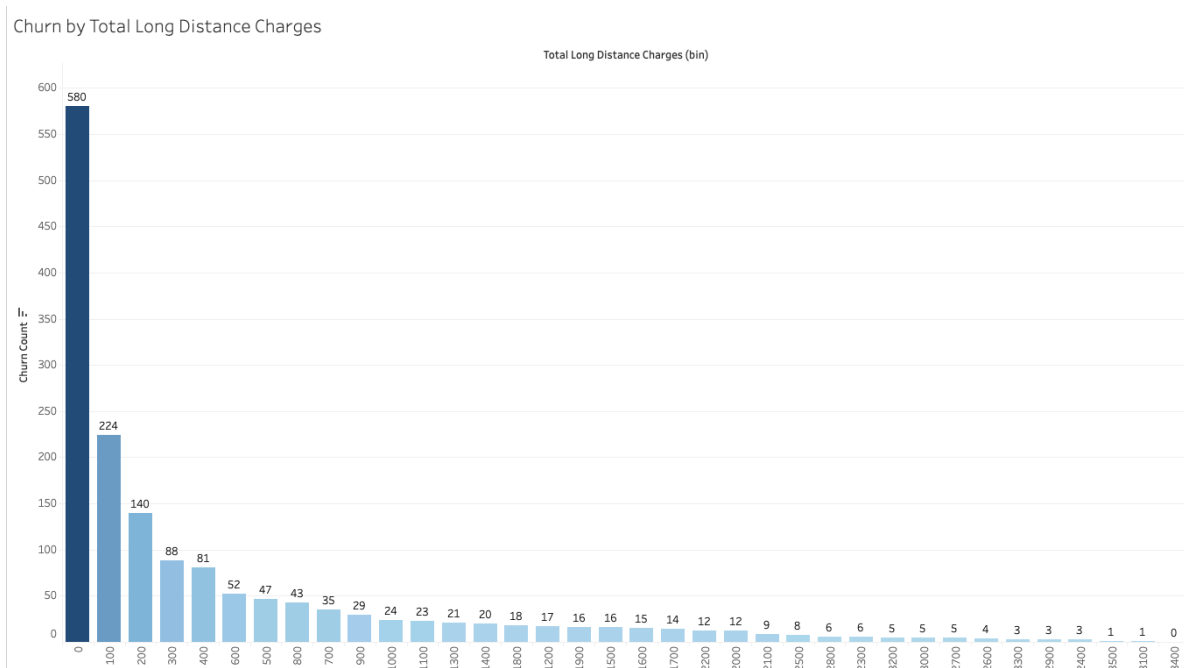
Churn by Total Long Distance Charges

The analysis of churn by total long distance charges reveals the following distribution:

- **$0-99**: 580 churned customers
- **$100-199**: 224 churned customers
- **$200-299**: 140 churned customers
- **$300-399**: 88 churned customers
- **$400-499**: 81 churned customers
- **$500-599**: 52 churned customers
- **$600-699**: 47 churned customers
- **$700-799**: 32 churned customers

- **$800-899**: 19 churned customers
- **$900-999**: 10 churned customers
- **$1000-1999**: 5 churned customers
- **$2000-2999**: 3 churned customers
- **$3000-3499**: 2 churned customers
- **$3500 and above**: 1 churned customer

Insights:

The data reveals a clear trend where the number of churned customers decreases as total long distance charges increase. The highest churn rate is observed in the $0-99 range, with 580 customers leaving the service. This number progressively decreases with higher charge brackets, culminating in a minimal churn rate of just 1 customer for the $3500 and above category.

This trend indicates that customers with lower total long distance charges are more likely to churn compared to those with higher charges. This could suggest that lower-charging customers may be less engaged or find less value in the service, whereas higher-charging customers, possibly with more extensive usage, are less likely to leave.

Recommendations:

- **Customers with Low Charges ($0-99)**: Investigate the reasons behind the higher churn rates among low-charging customers. Consider implementing strategies to enhance their engagement and perceived value, such as offering targeted promotions, improving service features, or increasing customer support.
- **High-Charging Customers**: Although churn rates are lower in higher charge brackets, it is important to continue providing excellent service and value to maintain these customers. Ensure that their needs are met and consider offering loyalty incentives to reinforce their commitment to the service.

By focusing on improving customer satisfaction and perceived value for those with lower long distance charges, the company can work towards reducing churn rates and enhancing overall customer retention.

Internet Type
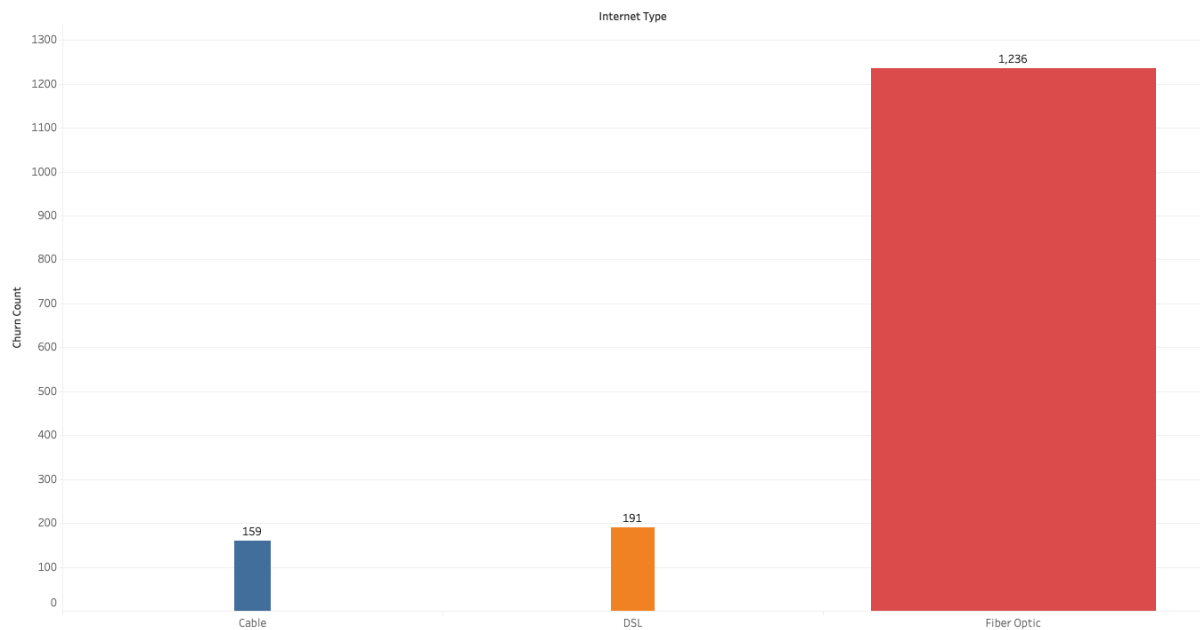
Churn by Product

The analysis of churn by product reveals the following distribution:

- **Fiber Optic**: 1,236 churned customers
- **DSL**: 191 churned customers
- **Cable**: 159 churned customers

Insights:

The data shows that "Fiber Optic" is associated with the highest churn rate, with 1,236 customers leaving the service. This is significantly higher compared to "DSL," which has 191 churned customers, and "Cable," which has 159 churned customers.
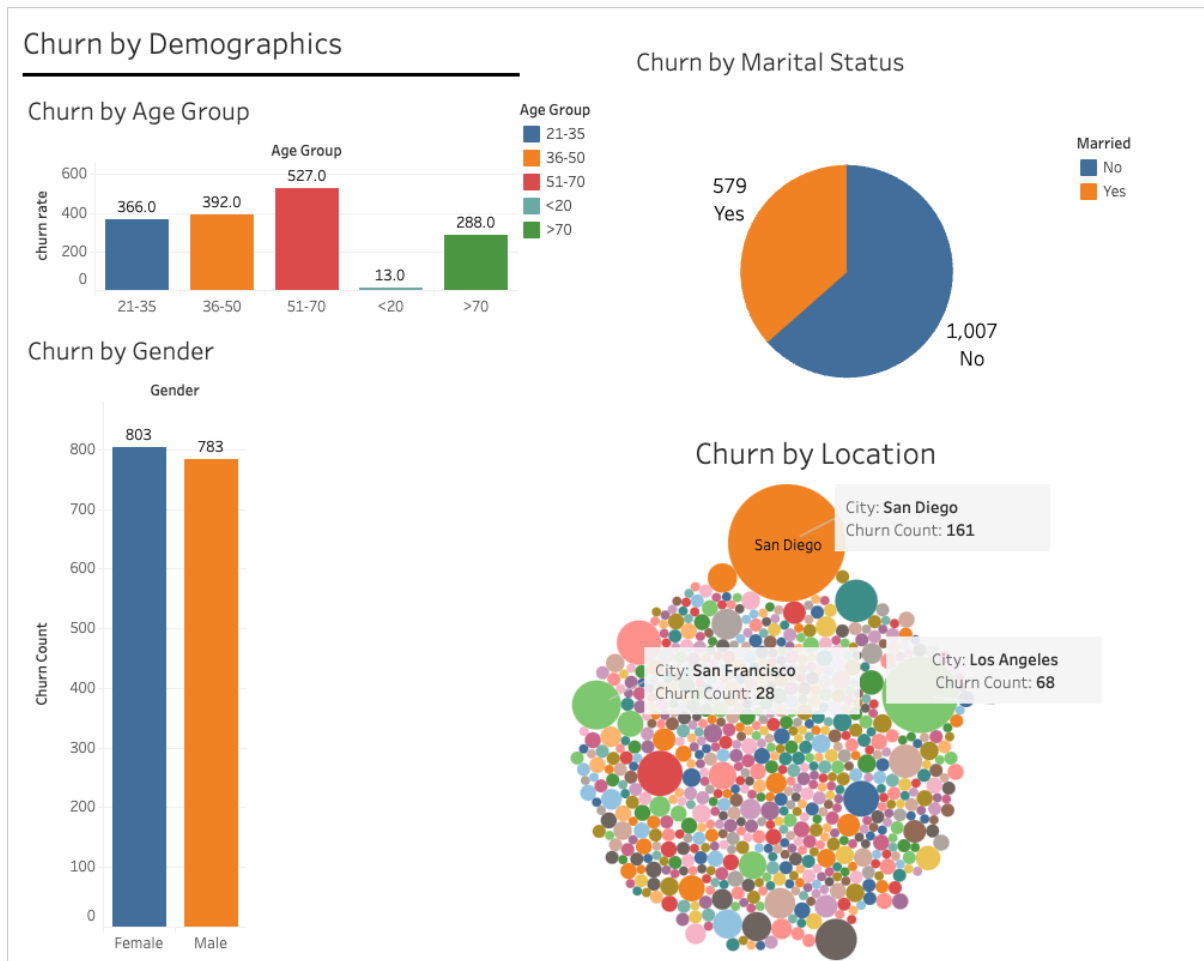
The high churn rate for Fiber Optic customers suggests potential issues specific to this product or service tier. Possible factors could include service quality, pricing, customer satisfaction, or competitive alternatives. In contrast, both DSL and Cable products have much lower churn rates, indicating relatively higher customer retention and satisfaction levels for these offerings.

- **Fiber Optic**: Investigate the reasons behind the high churn rate for Fiber Optic customers. Focus on improving the service quality, addressing customer feedback, and evaluating pricing strategies. Consider enhancing the support and features associated with Fiber Optic services to better meet customer expectations and reduce churn.

- **DSL and Cable**: While the churn rates are lower for DSL and Cable, continue to monitor customer satisfaction and maintain high service standards. Leverage insights from these more stable product categories to inform improvements and best practices that could potentially be applied to Fiber Optic services.
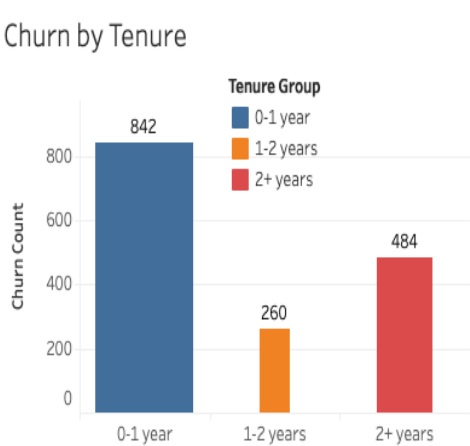
By addressing the specific issues affecting Fiber Optic customers and ensuring continued satisfaction for DSL and Cable users, the company can work towards reducing overall churn and enhancing customer retention across all product offerings.

DASHBOARD

Dashboard 2

Churn by Tenure

Tenure Group
- 0-1 year (blue)
- 1-2 years (orange)
- 2+ years (red)

Tenure Group	Churn Count
0-1 year	842
1-2 years	260
2+ years	484

Churn Count

Scale: 89 — 1,179

Churn by Payment types

Payment Type	Churn Count
Bank Withdrawal	1,179
Credit Card	318
Mailed Check	89

Churn by Product

Internet Type
- Cable (blue)
- DSL (orange)
- Fiber Optic (red)

Internet Type	Churn Count
Cable	159
DSL	191
Fiber Optic	1,236

Churn by Monthly Charges

Monthly Charge (bin)
- 100
- 80
- 60
- 40

Monthly Charge (bin)	Churn Count
100	256
80	644
60	462
40	201
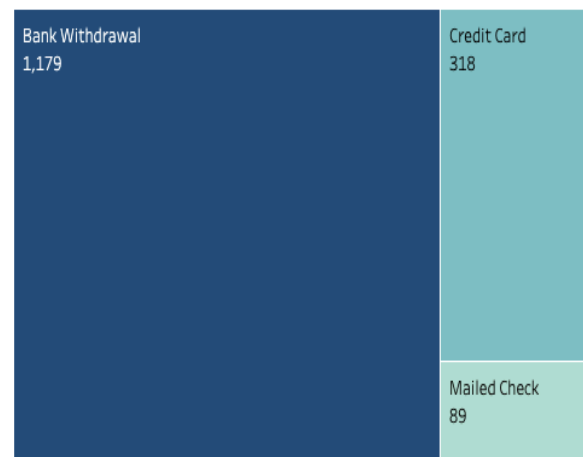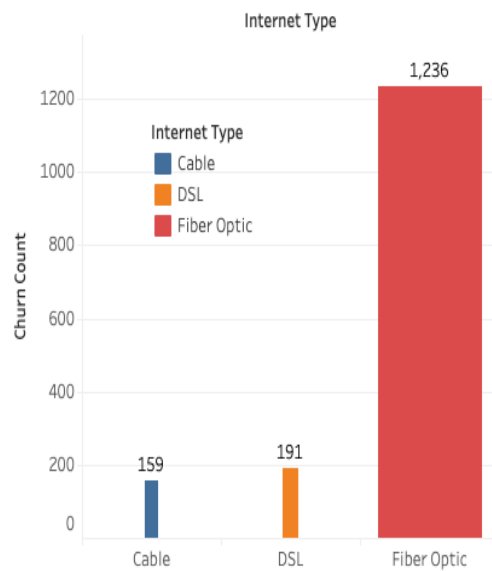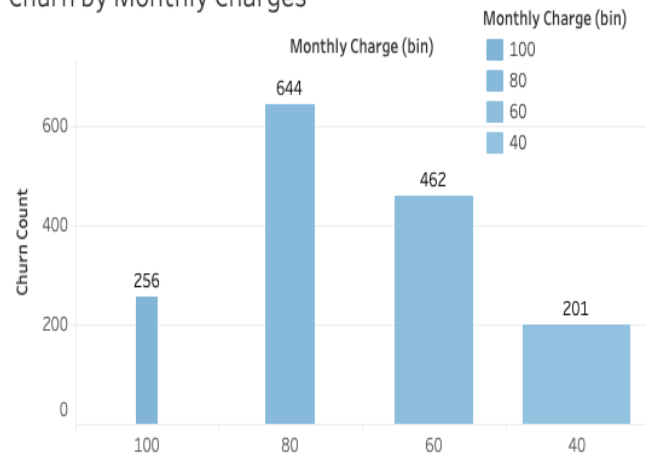
Dashboard 3

Revenue by Churned and Stayed

Count of Customer ID

1,586   3,249

churn rate

0 —— 1,586

14,636,436

3,522,975

Total Revenue: 15M, 10M, 5M, 0M

churn rate (bin): 0.0, 0.5, 1.0   0.0, 0.5, 1.0

Churn by Total Long Distance Charges

Total Long Distance Charges (bin)

Churn Count

0 —— 580

580

Churn Count: 600, 400, 200, 0

21 18 16 15 12 6 5 5 3 1 0

100, 400, 800, 1000, 1400, 1900, 1700, 2100, 2300, 2700, 2900, 3100

Churn by Reasons

Churn Category

Churn Category
- Null
- Competitor
- Dissatisfaction
- Other
- Poor Customer Service
- Price

Churn Count: 800, 600, 400, 200, 0

0 (Null)
744 (Competitor)
273 (Dissatisfaction)
163 (Other)
246 (Poor Customer Service)
160 (Price)

Comprehensive Business Report on Customer Churn Analysis

1. Introduction

Understanding and mitigating customer churn is crucial for maintaining profitability and growth in the telecom industry. This report provides a detailed analysis of customer churn across various dimensions, including demographics, payment methods, product types, and reasons for leaving. The insights derived aim to help telecom companies develop effective retention strategies, enhance service offerings, and optimize revenue streams.

2. Customer Insights

a. Demographic Insights:

- **Age Group:** The highest churn rates are observed among customers aged 51-70, with 527 churned customers. Younger and older age groups exhibit lower churn rates, indicating that middle-aged customers might be more dissatisfied or have specific needs that are not being met.
- **Gender:** Churn rates are relatively similar across genders, with 803 churned male customers and 783 churned female customers. Gender does not appear to be a significant factor in predicting churn, suggesting that retention strategies should focus on other demographic or behavioral factors.
- **Marital Status:** Unmarried customers exhibit a higher churn rate (1,007 churned customers) compared to married customers (579 churned customers). This indicates that unmarried customers might be more likely to switch providers, potentially due to differing lifestyle or financial priorities.
- **Location:** Churn rates vary significantly by location, with San Diego having the highest churn (161 customers) compared to other cities. This suggests that regional factors or service issues in San Diego need to be addressed to reduce churn in that area.

b. Behavioral Insights:

- **Payment Status:** Customers using Bank Withdrawal exhibit the highest churn rate (1,179 customers) compared to those using Credit Cards (318 customers) or Mailed Checks (89 customers). This could indicate issues with the payment method or associated billing processes.
- **Monthly Charges:** The highest churn is observed in the $80 monthly charge bracket (644 churned customers), while lower and higher charge brackets have comparatively lower churn rates. This suggests that customers in the $80 range may perceive less value for their expenditure.
- **Tenure:** New customers (0-1 year) have the highest churn rate (842 customers). This indicates that early-stage customers are more likely to leave, possibly due to dissatisfaction with the initial service experience.
- **Total Long Distance Charges:** The highest churn rate is observed in the $0-99 charge range (580 customers), with a gradual decrease as charges increase. This suggests that customers with lower usage may be more prone to churn.

- **Product Type:** Fiber Optic customers have the highest churn rate (1,236 customers) compared to DSL (191 churned) and Cable (159 churned) customers. This indicates potential issues with the Fiber Optic service that need to be addressed.

c. Financial Impact:

- **Revenue Impact:** The revenue loss from churned customers totals $3,522,975, compared to $14,636,436 from retained customers. This significant revenue disparity highlights the financial impact of churn and the importance of improving retention.

d. Reasons for Churn:

- **Churn Reasons:** The leading reasons for churn are "Competitor" (744 customers) and "Dissatisfaction" (273 customers), followed by "Poor Customer Service" (246 customers) and "Price" (160 customers). Addressing these issues can directly impact churn rates.

3. Retention Strategies

a. Targeted Interventions:

- **For High-Churn Demographics (Age Group 51-70, Unmarried Customers):** Develop targeted retention strategies such as personalized offers, tailored communication, and enhanced support to address specific needs and increase customer satisfaction.
- **For High-Churn Locations (San Diego):** Implement region-specific improvements such as better local service quality, targeted promotions, and customer engagement initiatives to reduce churn in high-risk areas.
- **For Payment Status Issues:** Review and optimize payment processes, especially for Bank Withdrawal users, to improve customer experience and reduce churn associated with payment difficulties.

b. Service Enhancements:

- **For Fiber Optic Product:** Conduct a thorough review of the Fiber Optic service to identify and address issues related to quality, pricing, and customer support. Consider improving service features or introducing customer loyalty programs.
- **For Monthly Charges:** Reassess the value proposition of the $80 charge bracket and consider adjusting service offerings or pricing to better align with customer expectations.

c. Customer Experience Improvements:

- **For New Customers (0-1 Year):** Enhance the onboarding experience with personalized support, introductory offers, and proactive engagement to improve initial satisfaction and reduce early churn.
- **For Long-Distance Charges:** Investigate reasons for churn among customers with lower long-distance charges and explore ways to add value or improve service to retain these customers

Key Metrics:

- **Churn Rates by Demographics, Product, and Location**
- **Revenue Impact of Churn**
- **Primary Reasons for Churn**
- **Trends in Monthly Charges and Long-Distance Charges**

Key Results:

1. **Churn Reduction Potential**:
   - The analysis identified specific customer segments that are more likely to churn. By targeting these segments with tailored retention strategies, the company could potentially reduce churn by a significant margin.
2. **Revenue Optimization**:
   - Retaining high-revenue customers was highlighted as a key opportunity for the business. The analysis showed that even a small reduction in churn could result in substantial revenue gains.
3. **Service Improvement Areas**:
   - The insights into churn reasons pointed to specific areas where service improvements could make a significant difference, such as addressing competition and enhancing customer support.
4. **Marketing Campaign Effectiveness**:
   - The data suggested that targeted marketing campaigns, focusing on at-risk customers, could be highly effective in reducing churn. This would involve personalized offers, loyalty programs, and proactive communication.

Business Impact:

- **Financial Impact**: The potential reduction in churn would lead to increased customer lifetime value and overall revenue growth.
- **Operational Impact**: Implementing the recommended service improvements could reduce customer complaints and increase satisfaction, leading to lower churn rates.
- **Strategic Impact**: The insights from the analysis could guide the company's broader strategic decisions, such as market positioning and competitive differentiation.

Business Recommendations for Reducing Customer Churn

Based on the comprehensive analysis of customer churn, the following business recommendations are proposed to address the identified issues and enhance customer retention:

1. Address High Churn Among Specific Demographics

- **Age Group 51-70:**
  - **Enhanced Support:** Implement dedicated customer support channels for this age group, focusing on personalized assistance and addressing their specific needs.
  - **Tailored Offers:** Develop promotions or service packages that cater to the preferences and requirements of customers aged 51-70.
  - **Customer Feedback:** Conduct surveys to understand their concerns and preferences better, and use this feedback to refine service offerings.
- **Unmarried Customers:**
  - **Flexible Plans:** Offer flexible and customizable plans that align with the dynamic lifestyle and financial priorities of unmarried customers.
  - **Engagement Programs:** Create targeted loyalty programs or incentives to increase engagement and satisfaction among unmarried customers.
  - **Promotions:** Run marketing campaigns highlighting benefits and features that resonate with unmarried customers.

2. Improve Service Quality and Address Regional Issues

- **San Diego:**
  - **Local Service Enhancements:** Assess and improve service quality specifically in San Diego, addressing any regional issues such as network coverage or customer service challenges.
  - **Targeted Promotions:** Offer exclusive deals or discounts to San Diego customers to increase retention and satisfaction.
  - **Customer Support:** Strengthen local customer support and engage with community feedback to resolve any specific complaints.

3. Optimize Payment Methods and Billing Processes

- **Bank Withdrawal:**
  - **Payment Flexibility:** Explore alternative payment options or improvements in the Bank Withdrawal process to reduce churn related to payment issues.
  - **Customer Assistance:** Provide additional support for customers using Bank Withdrawal to ensure a smooth billing experience.
- **General Billing Improvements:**
  - **Billing Transparency:** Enhance billing clarity and transparency to avoid confusion and dissatisfaction.
  - **Flexible Billing Options:** Offer more flexible billing options to cater to different customer preferences.

4. Enhance Service Offerings and Product-Specific Improvements

- **Fiber Optic Service:**
  - **Service Review:** Conduct a comprehensive review of the Fiber Optic service to identify and address quality issues, pricing concerns, or customer support gaps.
  - **Feature Enhancements:** Introduce new features or value-added services to improve customer satisfaction and differentiate Fiber Optic from competitors.
  - **Loyalty Programs:** Develop loyalty programs to reward long-term Fiber Optic customers and encourage retention.
- **Monthly Charges and Long-Distance Charges:**
  - **Pricing Strategy:** Reevaluate pricing strategies for various charge brackets to ensure they offer value for money. Consider adjusting plans or introducing new pricing tiers based on customer feedback.
  - **Usage-Based Incentives:** Implement usage-based incentives or discounts for customers with higher long-distance charges to enhance perceived value.

5. Strengthen Customer Experience and Onboarding

- **New Customers (0-1 Year):**
  - **Onboarding Programs:** Enhance the onboarding experience with personalized support, introductory offers, and clear communication about service benefits.
  - **Early Engagement:** Implement early engagement strategies to build a strong relationship with new customers and address any concerns promptly.

6. Address Key Churn Reasons

- **Competitor:**
  - **Competitive Analysis:** Conduct regular competitive analysis to stay informed about market trends and competitor offerings. Develop strategies to differentiate your services and offer unique value propositions.
  - **Customer Retention Strategies:** Implement retention strategies such as personalized offers and service improvements to counteract competitive threats.

- **Dissatisfaction and Poor Customer Service:**
  - **Service Quality Improvement:** Invest in improving overall service quality and customer support to address dissatisfaction and reduce churn.
  - **Feedback Mechanisms:** Establish robust feedback mechanisms to gather customer insights and address issues proactively.

By implementing these recommendations, telecom companies can address the root causes of customer churn, enhance service quality, and ultimately improve customer retention and satisfaction.

Conclusion

The analysis provides a detailed understanding of factors influencing customer churn, highlighting key areas for improvement and strategic intervention. By implementing targeted retention strategies and enhancing customer experiences, telecom companies can reduce churn rates, optimize revenue, and improve overall customer satisfaction.

THANK YOU