



INTERNET SERVICE COMPANY

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PROJECT OBJECTIVES

To create a comprehensive customer retention dashboard for the telecom company, allowing proactive identification of churn risk factors, implementing targeted retention initiatives, and ultimately reducing customer churn rates by leveraging data-driven insights.

Early Intervention

Proper analysis enables early identification of churn risk factors, allowing timely intervention to retain valuable customers before they terminate their contracts.

Cost Reduction

Understanding customer risk helps allocate resources efficiently, reducing the cost of retention efforts and maximizing their impact on high-risk segments.

Enhanced Customer Experience

By addressing underlying issues leading to churn, businesses can improve overall customer satisfaction and loyalty, leading to long-term profitability and growth.

VISION

Our vision is to become the forefront innovator in the telecom industry, leveraging advanced analytics to anticipate and mitigate churn, thereby fostering enduring customer relationships and establishing a benchmark for excellence in customer retention practices.



MISSION

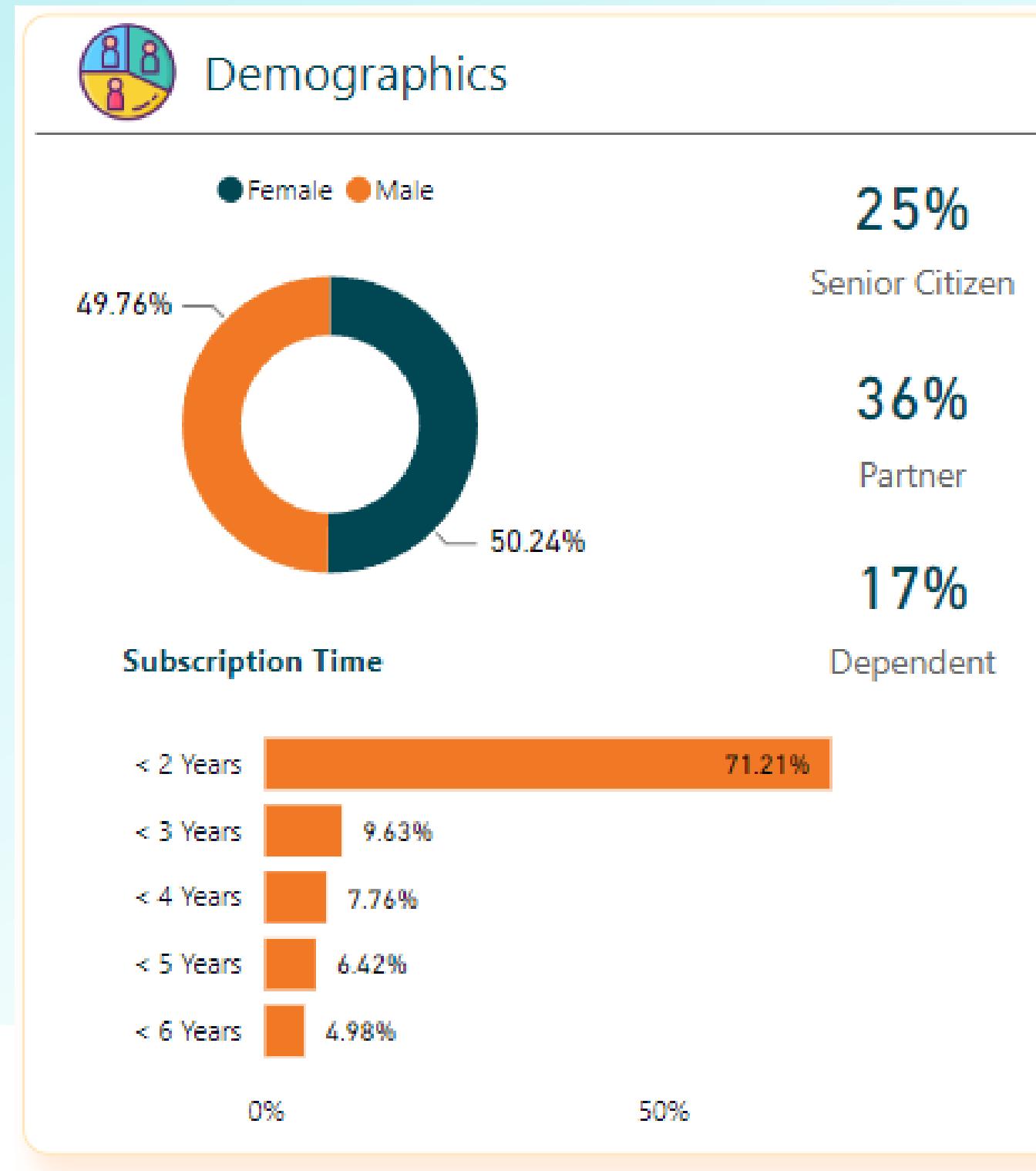
Our mission is to empower the telecom industry with data-driven insights, enabling proactive identification of churn risk factors and implementation of targeted retention strategies, ultimately fostering customer loyalty and sustainable business growth.



THE DATA

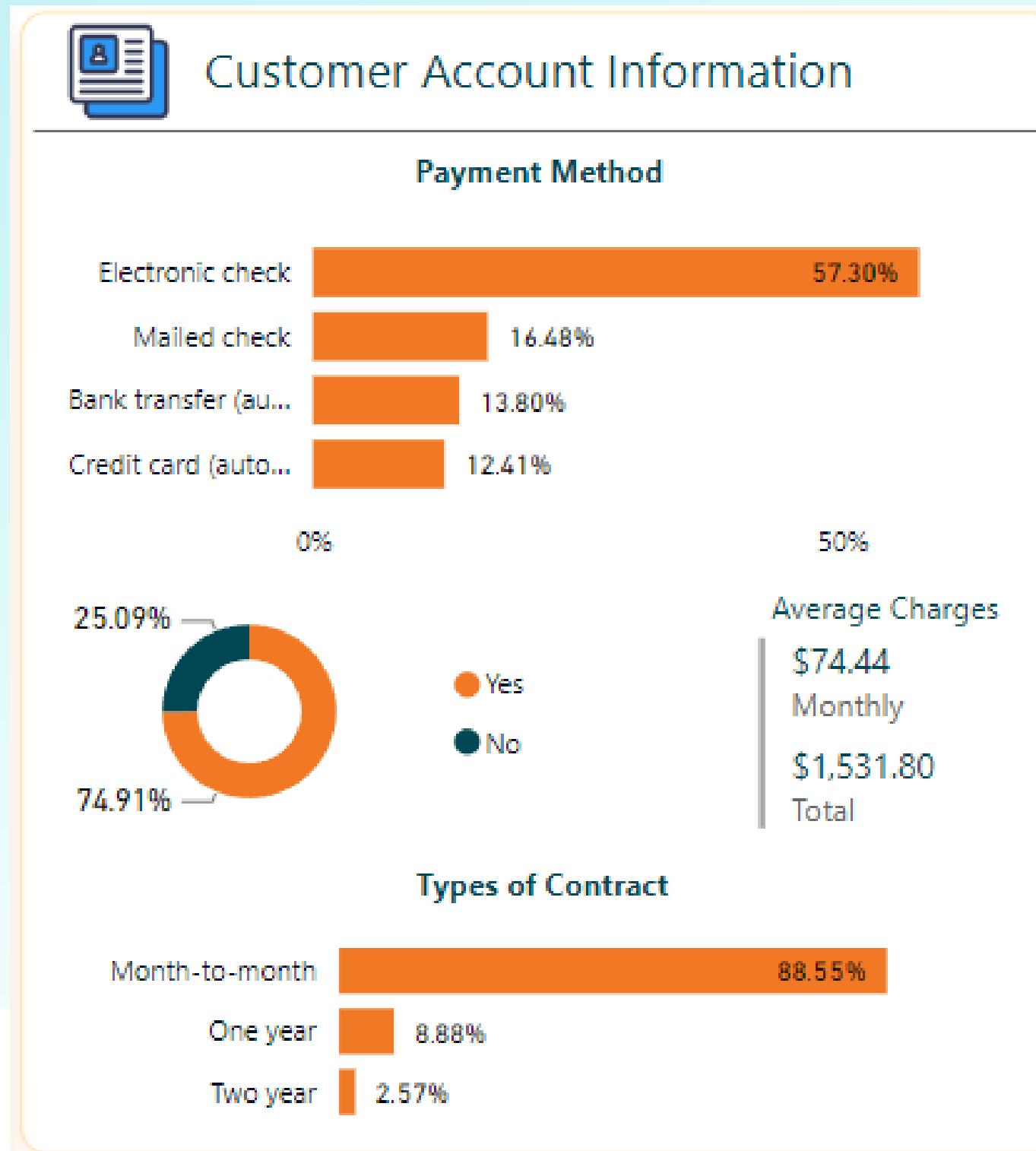
- **Demographic Information:** The dataset includes details such as gender, senior citizen status, partner and dependent status, providing insights into the demographic composition of the telecom company's customer base.
- **Service Usage and Tenure Data:** Information on services like phone, internet, streaming, and tenure of the customers provides an understanding of their usage patterns and longevity with the company.
- **Customer Interaction Metrics:** Metrics like the number of administrative and technical support tickets provide insights into customer interactions and satisfaction levels, which can influence churn propensity.

DEMOGRAPHIC ANALYSIS



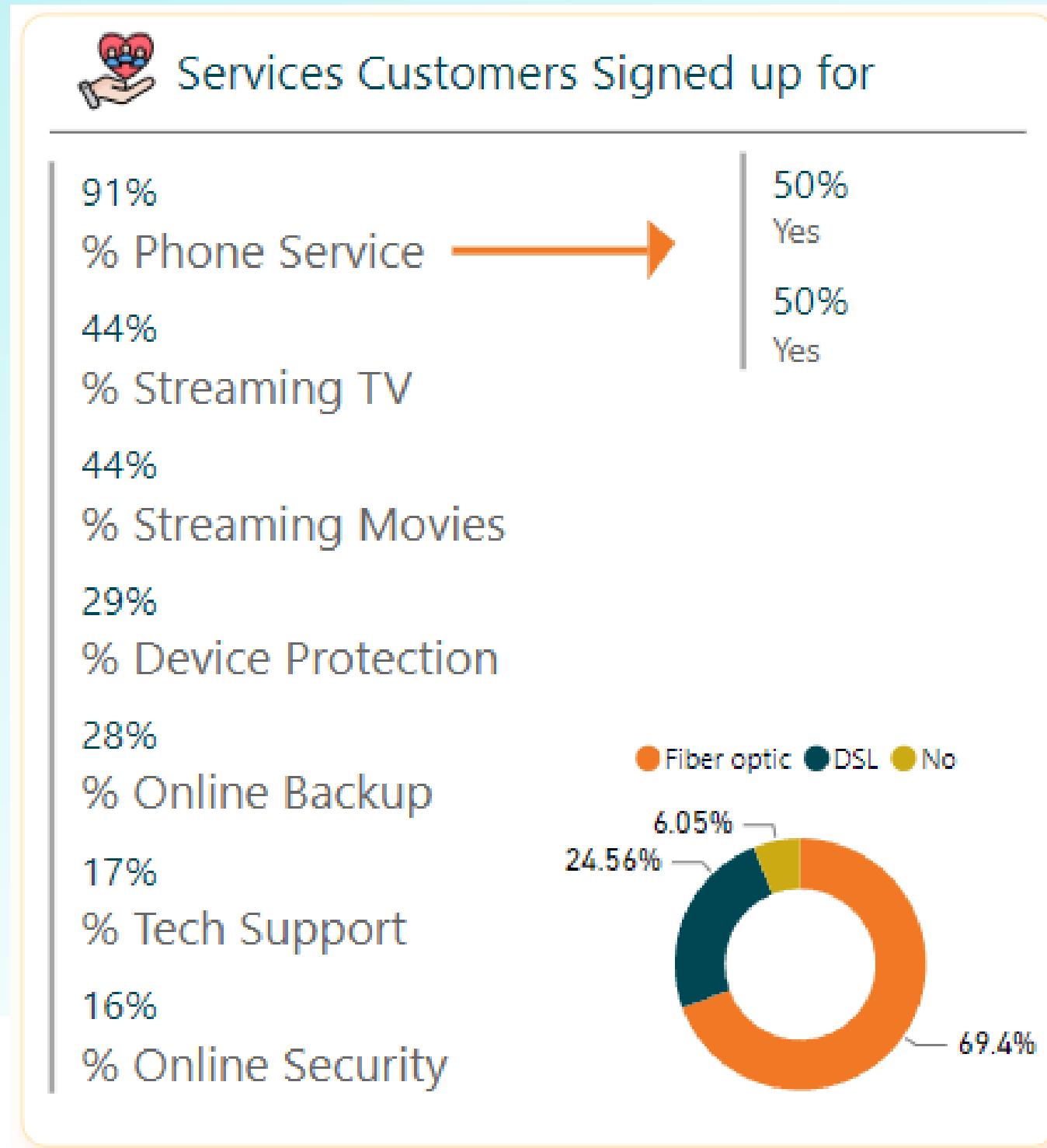
- **Gender Balance:** The dataset shows a near balance between male and female customers, with a slightly higher count of females (939) compared to males (930).
- **Female Majority:** Females account for 50.24% of the total gender count, indicating a slight numerical prevalence in the telecom's customer base.
- **Market Appeal:** The telecom's services appear to resonate with both genders, as reflected in the almost equal representation of male and female customers.
- **Tailored Strategies:** With a clear understanding of gender demographics, the telecom can develop targeted retention strategies to address the specific needs and preferences of both male and female customers, enhancing overall customer satisfaction and loyalty.

CUSTOMER ACCOUNT INFORMATION ANALYSIS



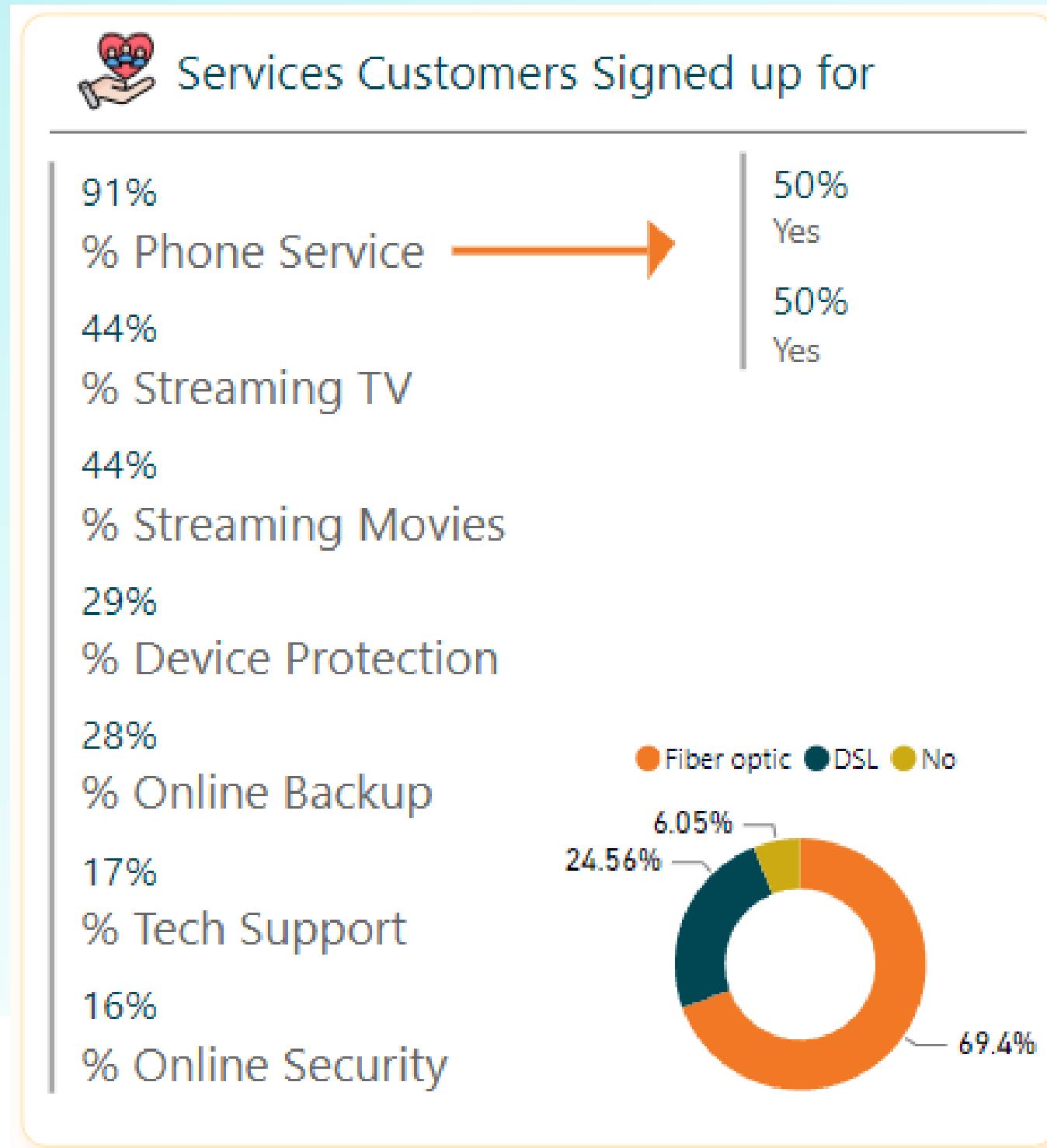
- Preference for Paperless Billing:** The data indicates a clear preference for paperless billing among customers, with 4,171 opting for it compared to 2,872 who did not, showcasing a significant majority (59.22%) in favor of paperless billing.
- Efficiency and Convenience:** The higher count of customers opting for paperless billing suggests that they value the convenience and efficiency of digital billing methods, which may offer benefits such as quicker access to invoices and reduced environmental impact.
- Cost-Effectiveness:** Embracing paperless billing can also translate into cost savings for the telecom company by reducing printing and mailing expenses associated with traditional paper billing methods.
- Opportunities for Engagement:** Understanding customer preferences for billing methods provides an opportunity for targeted engagement strategies, such as promoting paperless billing incentives or addressing concerns for customers who prefer traditional billing methods.

SERVICES CUSTOMERS SIGNED UP FOR - ANALYSIS



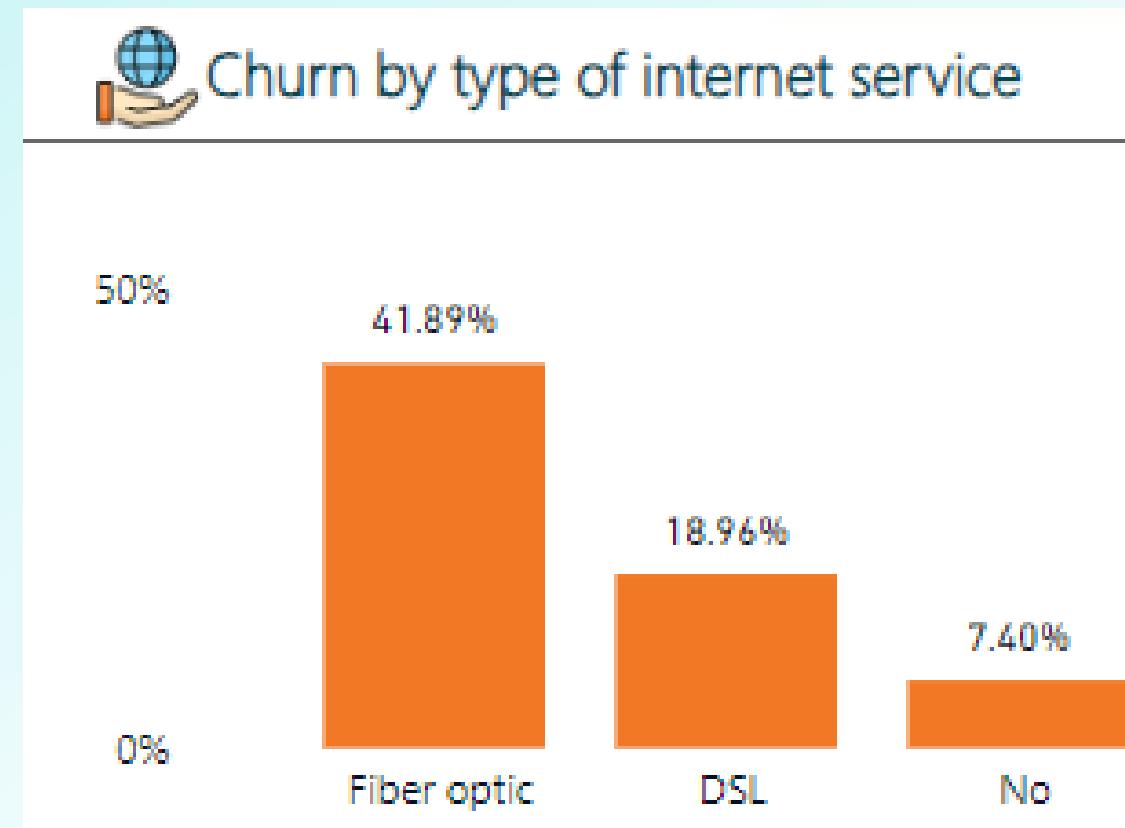
- **Preference for High-Speed Internet:** The analysis shows that a significant number of customers (3,096) have opted for Fiber optic internet service, indicating a strong demand for high-speed internet connectivity.
- **DSL as a Popular Alternative:** While Fiber optic is the preferred choice, DSL is also a popular option, with 2,421 customers opting for this service. This suggests that there is a diverse range of internet service preferences among customers.
- **Market Share:** Fiber optic accounts for 43.96% of the total internet service subscriptions, highlighting its dominant position in the market compared to DSL and no internet service.
- **Future Planning:** Understanding the popularity of different internet services can help the telecom company plan for future infrastructure investments and marketing strategies to meet the varying needs of its customer base.

SERVICES CUSTOMERS SIGNED UP FOR - ANALYSIS



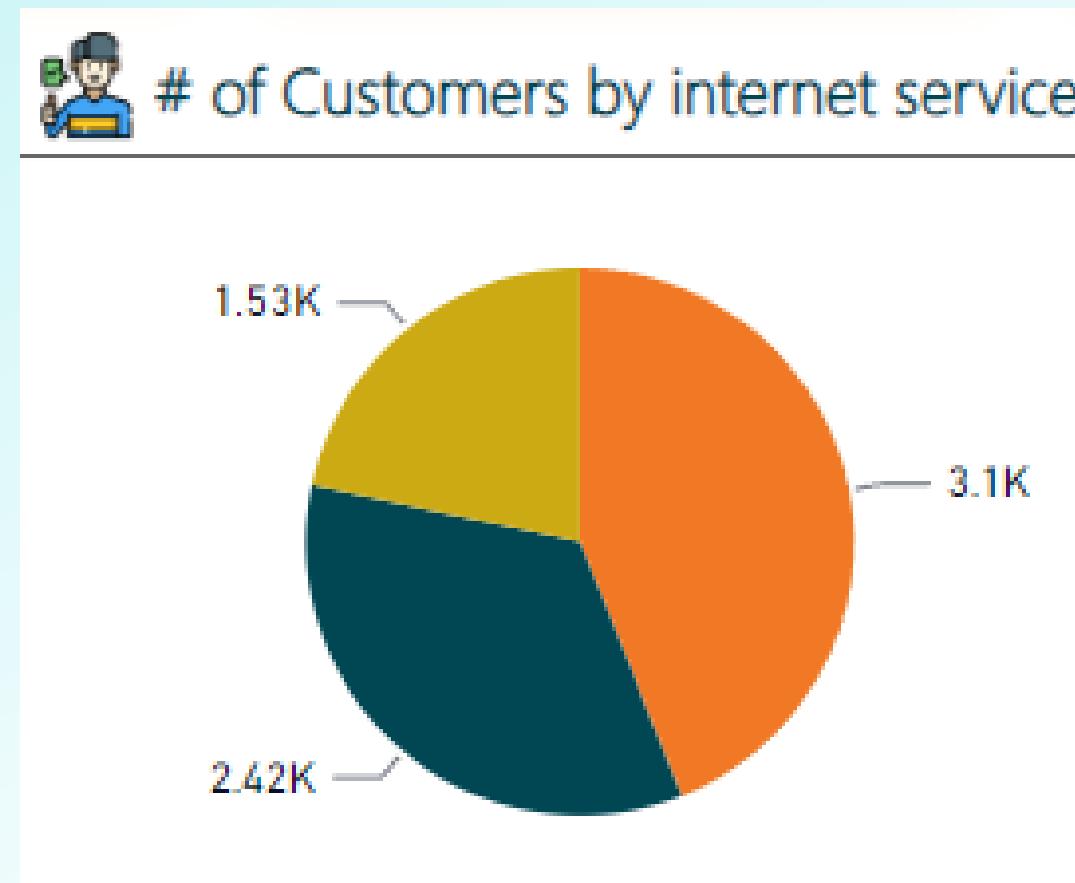
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CHURN BY TYPE OF INTERNET SERVICE



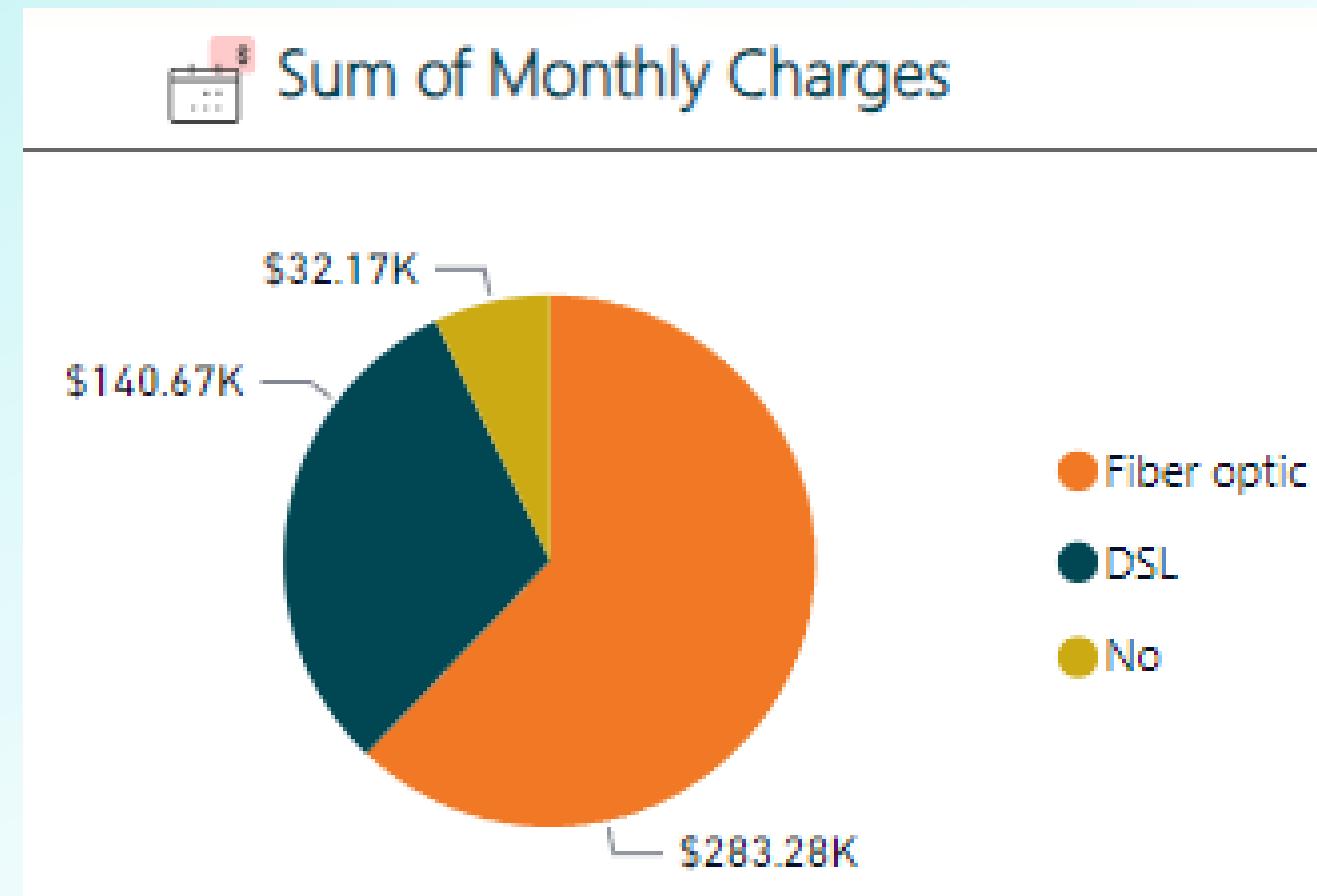
- **Contract Duration and Churn:** Month-to-month contracts show the highest churn rate (42.71%), indicating that customers on shorter contracts are more likely to churn compared to those on longer contracts.
- **Correlation between Churn and Customer Base:** The positive correlation between churn rate and total customers suggests that as the customer base grows, churn rate also tends to increase, emphasizing the need for effective churn management strategies.
- **Tenure and Revenue Impact:** Customers with tenure less than 2 years show a significant disparity between monthly charges and churn rate, indicating a potential mismatch between service value and customer satisfaction early in the contract.
- **Internet Service Type and Churn:** Fiber optic internet service has the highest churn rate (41.89%), followed by DSL (18.96%) and no internet service (7.40%), highlighting the influence of internet service type on customer retention.

NO. OF CUSTOMERS BY INTERNET SERVICE



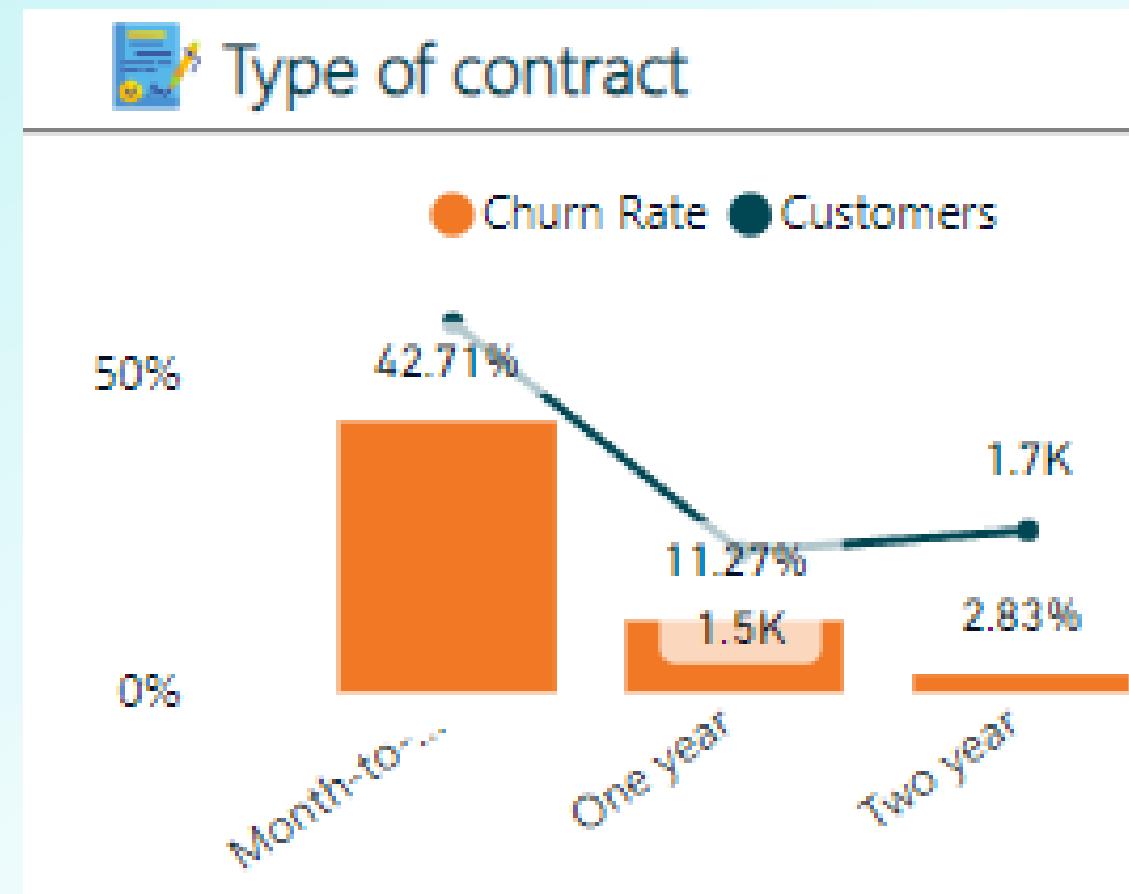
- **Internet Service Preference:** Fiber optic is the most preferred internet service among customers, with 3,096 customers, followed by DSL with 2,421 customers, and no internet service with 1,526 customers.
- **Market Dominance of Fiber Optic:** Fiber optic accounts for 43.96% of the total customer base, indicating its popularity and dominance in the market compared to other internet service options.
- **Demand for High-Speed Internet:** The higher count of customers opting for Fiber optic suggests a strong demand for high-speed internet connectivity among the telecom's customer base.
- **Opportunities for Service Expansion:** Understanding customer preferences for different internet services can help the telecom company tailor its service offerings and potentially explore opportunities to expand or enhance its Fiber optic service to meet the growing demand.

TOTAL MONTHLY CHARGES



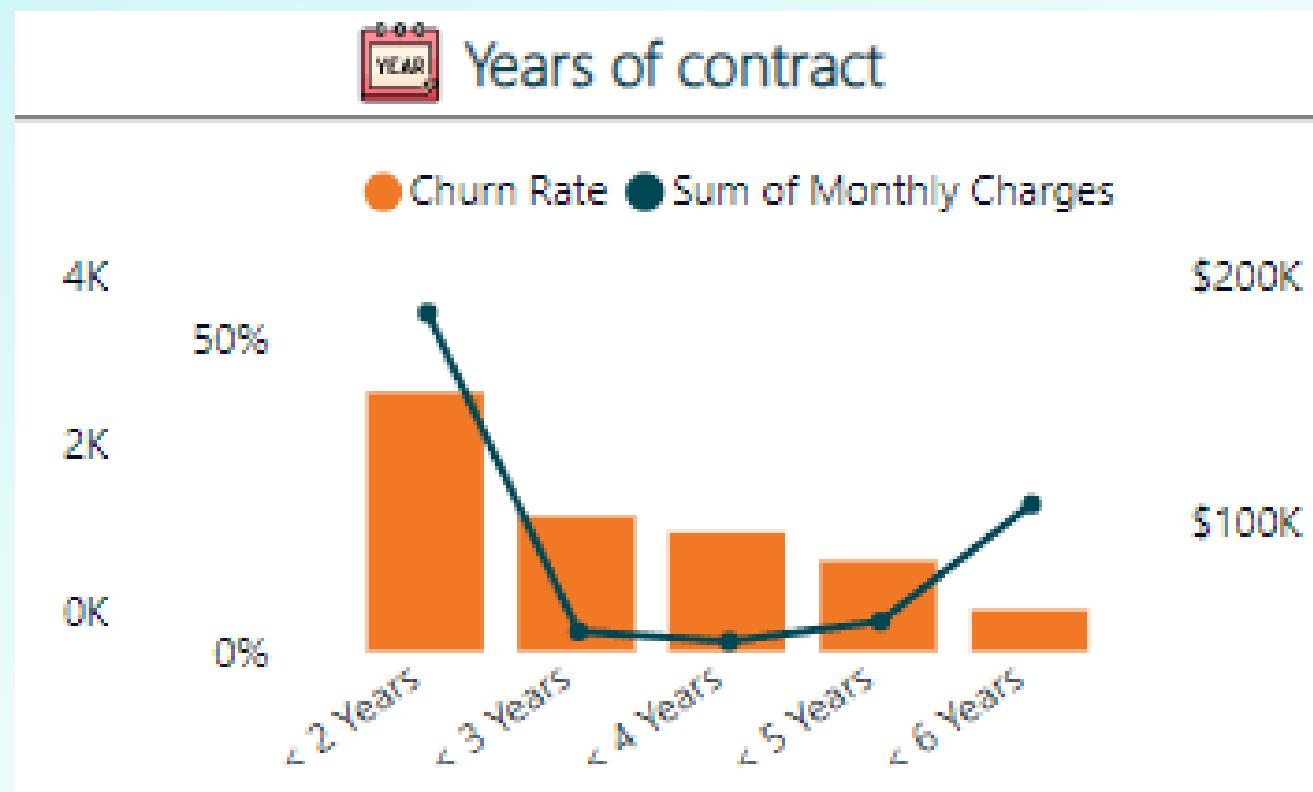
- **Revenue Generation:** Fiber optic service generates the highest total monthly charges, amounting to \$283,284.40, followed by DSL with \$140,665.35 and no internet service with \$32,166.85.
- **Significant Contribution of Fiber Optic:** Fiber optic service accounts for the majority of the total monthly charges, representing 62.11% of the sum. This indicates that Fiber optic is a significant revenue driver for the telecom company.
- **Value Proposition of Fiber Optic:** The higher sum of monthly charges for Fiber optic suggests that customers are willing to pay a premium for high-speed internet connectivity, emphasizing the value proposition of this service.
- **Revenue Potential:** Understanding the revenue distribution across different services can help the telecom company optimize its pricing strategies, invest in service enhancements, and prioritize marketing efforts to maximize revenue potential and profitability.

TYPE OF CONTRACT



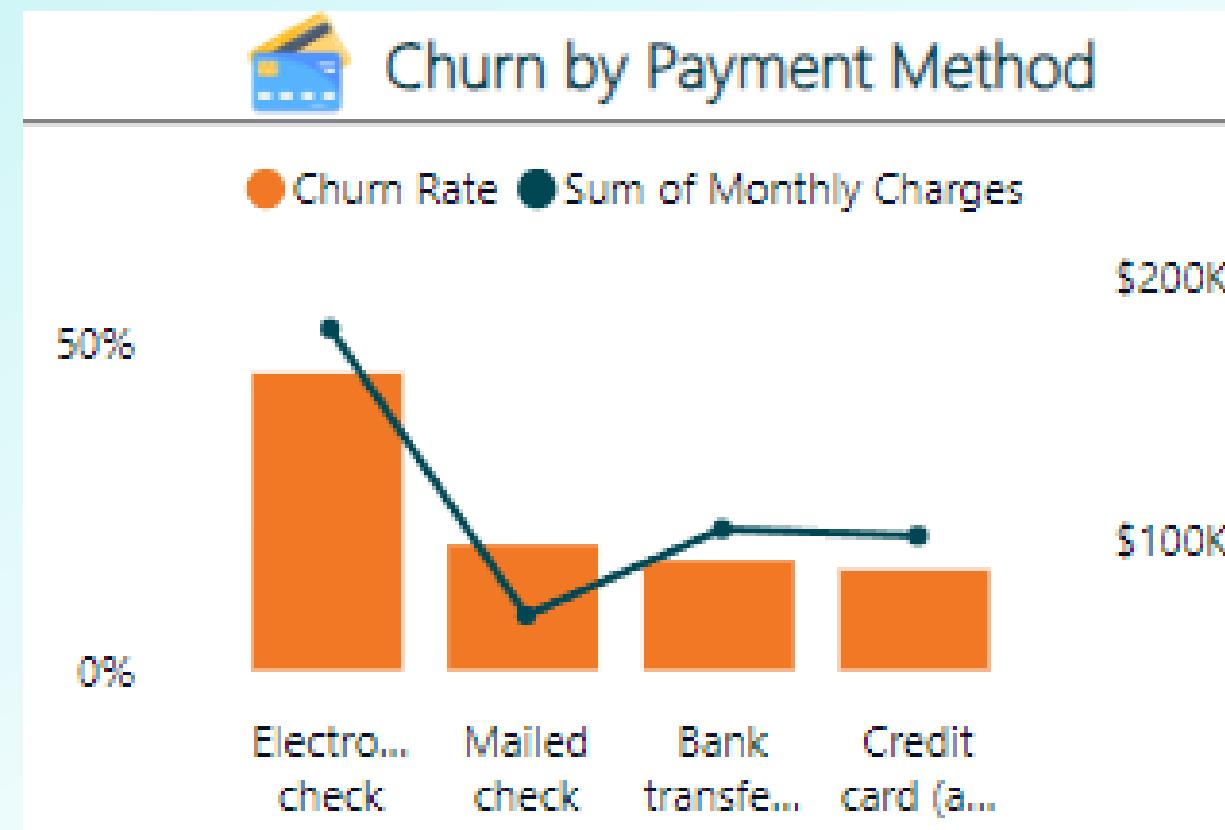
- **Impact of Contract Type on Churn:** Month-to-month contracts have the highest churn rate (42.71%), significantly exceeding longer-term contracts like Two-year contracts (2.83%), indicating a need for targeted retention efforts for short-term contract holders.
- **Correlation between Churn and Customer Base:** There's a positive correlation between churn rate and total customers, implying that as the customer base grows, so does the potential for churn, emphasizing the importance of proactive churn management strategies.
- **Prevalence of Month-to-Month Contracts:** Month-to-month contracts represent the majority of customers (55.02%), reflecting a preference for flexibility among customers. However, this flexibility also correlates with higher churn rates, highlighting the need for retention efforts in this segment.
- **Customer-Churn Disparity:** The largest disparity between customers and churn rate is observed with month-to-month contracts, indicating the volatility and risk associated with this contract type, underscoring the importance of retention strategies to preserve customer loyalty.

YEARS OF CONTRACT



- **Impact of Contract Duration on Churn:** Contracts of less than 2 years exhibit the highest churn rate (41.46%), significantly exceeding contracts of less than 6 years (6.61%), emphasizing the need for retention efforts, particularly for shorter-term contracts.
- **Correlation between Churn and Revenue:** There's a positive correlation between churn rate and total sum of monthly charges, suggesting that as revenue increases, so does the potential for churn, underscoring the importance of managing churn to maintain revenue stability.
- **Revenue Distribution by Contract Duration:** Contracts of less than 2 years account for 40.66% of the total sum of monthly charges, indicating their significant contribution to the telecom's revenue stream, despite their higher churn rate.
- **Disparity between Revenue and Churn:** The largest disparity between sum of monthly charges and churn rate occurs with contracts of less than 2 years, with monthly charges being 18545918.54% higher than the churn rate, highlighting the potential revenue loss associated with high churn rates in this segment.

CHURN BY PAYMENT METHOD



- **Impact of Payment Method on Churn:** Electronic check payment method exhibits the highest churn rate (45.29%), significantly surpassing Credit card (automatic) method (15.24%), suggesting a need for targeted retention efforts, particularly for customers using electronic checks.
- **Correlation between Churn and Revenue:** There's a positive correlation between churn rate and total sum of monthly charges, indicating that as revenue increases, so does the potential for churn, highlighting the importance of churn management to maintain revenue stability.
- **Revenue Distribution by Payment Method:** Electronic check payment method accounts for 39.54% of the total sum of monthly charges, reflecting its substantial contribution to the telecom's revenue stream despite its higher churn rate.
- **Disparity between Revenue and Churn:** The largest disparity between sum of monthly charges and churn rate is observed with the electronic check payment method, with monthly charges being 18034454.71% higher than the churn rate, underscoring the potential revenue loss associated with high churn rates in this payment method segment.

SUMMARY

- Customer churn analysis reveals insights across various factors such as demographics, service subscriptions, contract types, payment methods, and their correlation with churn rates and revenue.
- Key areas of attention include contract duration, payment methods, and internet service types, which exhibit significant disparities in churn rates and revenue contributions.

TIPS

- Focus on retention efforts for customers on shorter contract durations (< 2 years) and those using electronic check payment methods, as they exhibit the highest churn rates.
- Implement targeted retention strategies for customers subscribed to Fiber optic internet service, as they contribute significantly to both revenue and churn rates.
- Explore incentives or initiatives to encourage customers to switch to longer-term contracts and more stable payment methods to reduce churn and maintain revenue stability.