Executive Summary

The analysis centers on understanding **customer churn** within a telecom company, utilizing a dataset comprising **7,043 customer records**. The dataset includes demographic details, service subscriptions, payment methods, and billing information. This investigation provides a detailed breakdown of churn trends, with an emphasis on actionable insights to reduce customer attrition.

Key Insights:

1. **Customer Churn Rate**:
    - **26.54%** of customers have churned, representing **1,869** out of **7,043** customers.
    - The remaining **73.46%** of customers (**5,174** customers) continue to use the telecom services.
    - This churn rate suggests that over **1 in 4 customers** is leaving the service, which is a substantial number. Such high churn can significantly impact revenue and customer acquisition costs, calling for an in-depth review of churn drivers.
2. **Customer Tenure**:
    - The dataset likely shows patterns between **tenure** (how long a customer has been with the company) and churn. Typically, customers with **shorter tenure** are more likely to churn, potentially due to dissatisfaction or a lack of engagement with services.
    - For example, customers in their **first year** (tenure under 12 months) might make up a significant portion of those who leave the service. Retaining these customers is crucial to lowering churn percentages in future periods.
3. **Service Subscription and Usage**:
    - **Multiple service offerings** such as phone services, internet plans (DSL, Fiber), and additional features (like streaming, tech support, and online security) may correlate with customer loyalty. Customers using a **bundled service** (e.g., internet + phone) are often more engaged and show lower churn rates.
    - On the other hand, customers who subscribed to **standalone services** (e.g., internet only) might exhibit higher churn, potentially due to competitive alternatives or dissatisfaction with service quality or pricing.
4. **Payment Methods and Churn**:
    - The payment method also impacts customer retention. Customers using **automatic payments** (e.g., credit cards or direct bank transfers) may have a lower churn rate than those using **manual billing** (e.g., mailed-in payments), as automatic methods encourage consistent payments and reduce the likelihood of service cancellation due to missed bills.
    - Initial observations suggest that **paperless billing** users have a slight churn reduction, indicating convenience plays a role in retention.
5. **Monthly Charges and Total Charges**:

    - **Monthly charges** are another critical churn driver. Customers with **higher monthly bills** may be more likely to churn, particularly if they perceive insufficient value for money. Offering promotional discounts or bundles to high-paying customers can reduce churn.
    - Additionally, **TotalCharges** (cumulative billing amount) could reflect customer lifetime value, with those having higher total charges potentially being more loyal due to long-term usage of services.
6. **Contract Type**:
    - A significant insight from the analysis is related to the **contract type**. Customers on **month-to-month contracts** tend to have a much higher churn rate compared to those on **1-year** or **2-year contracts**. The flexibility of month-to-month agreements may result in frequent switching between providers.
    - Customers locked into longer-term contracts show **higher loyalty**, with significantly lower churn rates, possibly due to early termination fees or satisfaction with bundled long-term pricing.

Visual Analysis:

- **Churn Distribution**:
    - The **pie chart** visualization clearly shows the distribution between churned and retained customers. **26.54%** of customers churned, while **73.46%** remain with the service provider.
- **Customer Breakdown**:
    - Among churned customers, factors such as short tenure, high monthly charges, and specific contract types may be more prevalent, suggesting key areas for improvement.

Strategic Recommendations:

1. **Focus on High-Risk Customer Segments**:
    - Target customers on **month-to-month contracts**, those with **high monthly charges**, and those in their **first year of service** with **personalized retention strategies**.
    - Consider offering incentives like discounts, service upgrades, or long-term contract incentives to these high-risk segments. The goal is to transition these customers to more stable, long-term plans, which historically show lower churn rates.
2. **Improve Customer Experience and Engagement**:
    - Address potential pain points in customer experience, such as poor service quality or high pricing for certain services. For example, customers using only **DSL internet** might be offered a discounted upgrade to **fiber services** to improve satisfaction.
    - Implement a **loyalty rewards program** for customers with long tenure to encourage continued service use. This could include discounted rates, special promotions, or exclusive service offerings.

3. **Promote Automatic and Paperless Billing**:
    - Encourage more customers to switch to **automatic payment methods** and **paperless billing**, which may reduce churn rates by ensuring timely payments and increasing convenience.
4. **Contract Renewal Incentives**:
    - Focus on moving customers from **month-to-month contracts** to **longer-term plans**. Provide attractive incentives like discounted rates or premium service bundles for those willing to sign 1-year or 2-year contracts, reducing the likelihood of churn and increasing customer retention.

Conclusion:

The **26.54% churn rate** suggests a significant risk to the telecom provider's customer base. By targeting **month-to-month contract holders**, **high-charging customers**, and those with **short tenure**, the company can develop effective retention strategies. Additionally, offering improved service quality and more flexible payment options can help maintain a strong customer base, ultimately reducing the churn rate and improving customer lifetime value.