**Telco Churn Analysis Report**

**Introduction:**

The objective of this analysis is to identify key patterns and insights related to customer churn at a telecommunications company. By analyzing churn rates across service types, contract types, payment methods, demographic segments, and usage patterns, we aim to pinpoint areas of concern and recommend strategies for customer retention.

**1. Churn Analysis by Service and Contract Type**

**Objective:** To examine how different service types (Phone and Internet) and contract types (Month-to-month, One Year, Two Year) correlate with churn rates.

**Findings:**

* Customers with month-to-month contracts exhibit a significantly higher churn rate compared to those on longer-term contracts.
* Fiber optic internet service customers show a higher likelihood of churning, likely due to higher costs or service dissatisfaction.
* Customers without a phone service tend to have lower churn rates, suggesting a stronger retention factor for bundled services.

**Visualization:** A bar chart showing churn rates segmented by contract type and service type.

**2. Churn by Payment Method**

**Objective:** To identify how different payment methods influence churn behavior.

**Findings:**

* Customers who pay using electronic checks exhibit the highest churn rates, indicating potential dissatisfaction with the payment method or financial instability.
* Customers using credit cards or bank transfers demonstrate comparatively lower churn rates.

**Visualization:** A horizontal bar chart illustrating churn rates by payment method.

**3. Demographic Analysis (Gender and Senior Citizen)**

**Objective:** To assess how gender and senior citizen status affect churn rates.

**Findings:**

* Senior citizens are more likely to churn than non-senior customers, possibly due to changing service needs or financial constraints.
* There is no significant gender-based difference in churn rates, indicating that other factors, such as contract type and payment method, may play a larger role in customer retention.

**Visualization:** A stacked bar chart showing churn rates segmented by gender and senior citizen status.

**4. Usage Analysis**

**Objective:** To evaluate how customer usage patterns (Internet usage, streaming hours, tech support calls, call minutes) correlate with churn rates.

**Findings:**

* Heavy internet users with high streaming hours are more likely to churn, especially if they also make frequent tech support calls.
* Customers with low internet usage but frequent calls also exhibit higher churn rates, suggesting possible service dissatisfaction or technical issues.

**Visualization:** A scatter plot shows usage metrics segmented by churn status.

**Conclusion:**

The analysis reveals that contract type, payment method, and service type are significant drivers of churn. Usage patterns further highlight potential service quality or pricing issues. To reduce churn, the company should consider targeted retention strategies for month-to-month contract holders, electronic check users, and heavy internet/streaming users. Additionally, enhancing customer support for senior citizens could mitigate churn rates in this demographic.