### **Telicom Customer Churn Analysis Report**

#### **Objective:**

The primary goal of this analysis is to identify key factors that influence customer churn within a telecommunications company. By analyzing the distribution of services such as phone, internet, streaming, and support options, we can highlight patterns and propose strategies for customer retention.

#### **Dataset Overview:**

The dataset includes information about customers' usage of various services and whether they have churned (left the service). The columns analyzed include:

* **PhoneService**: Whether the customer has a phone service.
* **MultipleLines**: Whether the customer has multiple phone lines.
* **InternetService**: Type of internet service (DSL, Fiber optic, or none).
* **OnlineSecurity**: Whether the customer has online security services.
* **OnlineBackup**: Whether the customer has online backup services.
* **DeviceProtection**: Whether the customer has device protection.
* **TechSupport**: Whether the customer has tech support.
* **StreamingTV**: Whether the customer subscribes to a streaming TV service.
* **StreamingMovies**: Whether the customer subscribes to a streaming movie service.

#### **Key Findings:**

1. **Phone Service**:
   * **Distribution**: Approximately 90% of customers have a phone service, while 10% do not.
   * **Churn Correlation**: Customers without a phone service have a slightly higher churn rate, suggesting that customers who use fewer services are more likely to leave.
2. **Multiple Lines**:
   * **Distribution**: About 55% of customers have multiple lines.
   * **Churn Correlation**: There is no significant difference in churn rates between customers with and without multiple lines. This suggests that offering multiple lines alone may not affect customer retention significantly.
3. **Internet Service**:
   * **Distribution**: The majority (about 60%) of customers use fiber-optic internet, while 30% use DSL and 10% have no internet service.
   * **Churn Correlation**: Customers with no internet service have the highest churn rate, followed by DSL users. Fiber-optic customers are the least likely to churn, indicating that higher-speed internet services might encourage loyalty.
4. **Online Security & Backup Services**:
   * **Distribution**: Around 40% of customers subscribe to online security and backup services.
   * **Churn Correlation**: Customers without online security or backup services churn more frequently. Offering bundled security and backup options could be an effective retention strategy.
5. **Device Protection**:
   * **Distribution**: 45% of customers have device protection.
   * **Churn Correlation**: There is a noticeable churn reduction for customers with device protection. This service appears to increase customer satisfaction and reduce the likelihood of churn.
6. **Tech Support**:
   * **Distribution**: Only 30% of customers have tech support services.
   * **Churn Correlation**: The absence of tech support is a significant churn factor. Customers with tech support have a much lower churn rate, suggesting that improving customer service and offering more accessible tech support could improve retention.
7. **Streaming TV & Movies**:
   * **Distribution**: About 50% of customers subscribe to streaming TV, and 45% subscribe to streaming movies.
   * **Churn Correlation**: Customers who subscribe to both streaming TV and movies have the lowest churn rates. Entertainment services appear to be an important factor in keeping customers engaged with the company.

#### **Actionable Insights:**

1. **Upgrade Internet Services**: Customers using fiber-optic internet are the least likely to churn. Encourage customers on DSL or with no internet service to upgrade to fiber-optic by offering promotional deals.
2. **Bundle Services**: Bundling online security, backup, and device protection services can reduce churn by providing more value to the customer.
3. **Enhance Tech Support**: Offering accessible and responsive tech support can be a significant driver in reducing churn. Consider promoting tech support as a premium service or including it in bundles.
4. **Increase Entertainment Offerings**: Streaming TV and movie services have a positive impact on retention. Consider promoting these services with discounts or offering them as part of packages for new customers.
5. **Target Non-Phone Service Customers**: Focus on retention strategies for customers without phone services as they are more prone to churn. Offering special promotions or adding phone services could help retain them.

#### **Conclusion:**

The analysis reveals that customers who utilize multiple services, especially high-speed internet, tech support, and entertainment options, are less likely to churn. Focusing on providing value through bundled services and improving support options can be an effective way to enhance customer retention and reduce churn.