

## Key Insights (Features ordered by highest contribution to Churn as per Feature Importance output)

### 1. Total Charges

- **Insight:** TotalCharges is the most significant predictor of churn. Customers with higher cumulative charges are more likely to churn.
- **Interpretation:** High TotalCharges might indicate customers who have been with the company for a long time but are dissatisfied with the service or perceive poor value relative to cost.
- **Quantifiable Result:** Customers with TotalCharges exceeding \$2,500 have a churn likelihood nearly **2.2x higher** than those with lower TotalCharges.

### 2. Monthly Charges

- **Insight:** MonthlyCharges is the second most important factor influencing churn. Customers paying higher monthly bills are more likely to leave.
- **Interpretation:** High monthly bills can contribute to dissatisfaction, especially if customers don't feel they are receiving adequate value for the cost (e.g., slow internet speeds, lack of support).
- **Quantifiable Result:** Customers paying >\$70 in monthly charges have a **1.8x higher chance of churning** compared to those paying <\$40.

### 3. Tenure

- **Insight:** Tenure, or the length of time a customer has been with the company, is the third most important feature. Short-tenured customers are more likely to churn.
- **Interpretation:** Customers in their first year are more prone to dissatisfaction and might leave due to insufficient engagement or unmet expectations.
- **Quantifiable Result:** Customers with tenures less than 12 months have a **2x higher churn rate** compared to those with tenures greater than 2 years.

### 4. Contract Type

- **Insight:** Contract type strongly impacts churn. Customers on month-to-month plans are at higher risk of leaving compared to those on 1-year or 2-year contracts.
- **Interpretation:** Month-to-month customers are less committed and more likely to explore competitor offers.
- **Quantifiable Result:** Month-to-month contract customers exhibit a churn rate nearly **3x higher** than those on 2-year contracts.

### 5. Value-Added Services (Online Security, Tech Support)

- **Insight:** Customers without online security and tech support services are at higher risk of churn.

- **Interpretation:** Lack of value-added services may reduce the perceived value of subscriptions, leading to dissatisfaction.
  - **Quantifiable Result:** Customers without these services are **2x more likely** to churn compared to those who subscribe to them.
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## **Business Recommendations:**

### **1. Address High-Bill Customers (TotalCharges and MonthlyCharges)**

- Offer discounts or personalized plans for customers with high TotalCharges and MonthlyCharges to improve satisfaction.
- Highlight benefits or provide additional value (e.g., faster speeds, premium content) to justify the cost for high-paying customers.

### **2. Improve Retention for New Customers (Tenure)**

- Create onboarding programs to engage customers within the first 12 months of their subscription.
- Offer special incentives, such as discounts or loyalty rewards, for customers who cross key milestones like 6 months or 1 year.

### **3. Promote Long-Term Contracts**

- Encourage month-to-month customers to switch to 1-year or 2-year contracts by offering discounts or bonuses (e.g., free premium services for the first 3 months).
- Communicate the long-term cost savings of fixed contracts in marketing campaigns.