

- **Contract Type and Churn:**

- Customers on **month-to-month contracts** exhibit the highest churn rate, with **42%** of such customers likely to churn.
- In contrast, customers on **one-year** and **two-year** contracts have churn rates of **11%** and **3%**, respectively.
- **Implication:** Longer contract periods serve as a strong retention tool, as customers with extended commitments are far less likely to leave.

- **Payment Methods and Churn:**

- Customers paying via **electronic checks** show the highest churn rate at **45%**, while those using, **credit cards, bank transfers or mailed checks** have significantly lower churn rates, averaging around **15-18%**.
- **Implication:** The convenience, security, and trust issues related to electronic payments might be contributing factors. Encouraging customers to switch to more stable payment methods could reduce churn.

- **Churn by Tenure:**

- Customers with **less than one year** of tenure are the most likely to churn, with a **50%** churn rate. Those with **1-3 years of tenure** show a decreasing churn trend at 35%, while customers who have been with the company **for more than three years** have a churn rate of just **15%**.
- **Implication:** Engaging customers early in their journey, especially within the first year, is critical for retention.

- **Churn by Internet Service Type:**

- Customers using **Fiber Optic** services show a higher churn rate of **30%**, compared to DSL customers with a churn rate of **20%**.
- **Implication:** This could be due to increased competition or dissatisfaction with service quality. Understanding customer satisfaction with service speed and reliability may help retain fiber optic users.

- **Senior Citizens and Churn: %**

- The analysis reveals that **senior citizens** (aged 65+) have a churn rate of **41**, compared to a **26%** churn rate among non-senior citizens.
- **Implication:** Special retention programs and targeted customer service for senior customers may help reduce churn in this demographic.

Visualizations & Data Insights:

- **Bar Charts and Line Graphs:**

- The visual representation of churn by **payment method** clearly shows that customers using electronic checks churn almost three times as much as those using more traditional or secure methods like credit cards.
- **Customer tenure** vs. churn rate visualizations reveal a clear declining trend in churn as customers' tenure increases, underscoring the need for early-stage customer loyalty programs.

- **Percentage Distribution of Churn Across Factors:**

- **Payment Methods:** 45% churn for electronic check users, 15% for credit card users.
- **Contract Types:** 42% churn for month-to-month contracts, 11% for yearly contracts, 3% for two-year contracts.
- **Tenure:** 50% churn in the first year, dropping to 15% after three years.