

Executive Summary: Infotech Customer Churn Analysis

Objective:

The goal of this analysis is to understand customer churn trends, identify key factors influencing customer attrition, and provide actionable insights to improve customer retention.

Key Findings & Insights:

1. Data Preparation & Cleaning:

- The dataset was preprocessed by addressing missing values in the **TotalCharges** column, replacing blanks with 0, and converting data types to ensure consistency.
- The **SeniorCitizen** column was transformed from binary (0/1) to categorical (Yes/No) for better readability.

2. Customer Churn Distribution:

- A **count plot** and **pie chart** were created to analyze the proportion of customers who churned.
- **Churn Rate Analysis:**
 - **Percentage of customers who churned: 26.5%**
 - **Percentage of customers who retained: 73.5%**
- This indicates that over **a quarter of the customers** have left, highlighting the need for retention strategies.

3. Factors Contributing to Churn:

- Initial observations suggest that **contract type, tenure, and total charges** are key factors influencing churn.
 - Customers with **month-to-month contracts** and **lower tenure** appear to have a **higher churn rate**, indicating a lack of long-term commitment.
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Recommendations & Business Implications:

1. Targeted Retention Strategies:

- Focus on customers with **month-to-month contracts**, as they have the **highest churn rate**.
- Offer incentives like discounts or loyalty programs to encourage **long-term commitments**.

2. Improved Customer Engagement:

- Analyze **customer feedback** to identify dissatisfaction points.
- Strengthen **customer support & personalized service** for high-risk churn customers.

3. Data-Driven Predictive Modeling:

- Implement **machine learning models** to predict churn-prone customers early.
- Use targeted marketing strategies to re-engage customers at risk of leaving.

Conclusion:

The analysis highlights that **26.5% of customers have churned**, predominantly those with **short-term contracts** and **lower tenure**. By leveraging customer behavior insights, implementing proactive retention strategies, and improving engagement, businesses can significantly **reduce churn rates and enhance customer loyalty**.