

### Insights:

- Male and female customers are equally likely to churn.
- The churn rate decreases with increase in usage in tenure in months.
- Senior citizens are more likely to churn than middle aged customers.
- Bank withdrawal is the highest used payment method followed by credit card.
- Its very very likely for customers to churn if they have 'Month-to-Month contract type'.
- Customers who opted for paperless billing are more likely to churn.
- The company lost customers majorly due to better offers and devices from the competitors. Also the customer support of the company was not very well mannered and professional.
- The long distance charges doesn't seem to affect the churn rate.
- Customers without any device plan are more likely to churn.
- It is not conclusive to paint any picture on churn rate based on number of dependents as our dataset seems to have majority of customers with no dependents than otherwise.
- Cities with higher population have low churn rate.

**Note:** Please open and go through the python notebook file (EDA.ipynb) to have a look at the visualisations that led to these insights.

Based on the insights I have gathered from the analysis of the dataset on customer churn in the telecommunications service provider, here are some recommendations and suggestions:

1. **Focus on High Churn Cities:** Allocate additional resources and marketing efforts to retain customers in cities with the highest churn rates. Identify the specific reasons for high churn in these areas and address them.
2. **Gender-Neutral Strategies:** Since male and female customers are equally likely to churn, tailor retention strategies to address the needs and preferences of all genders equally.
3. **Promote Longer Contracts:** Encourage customers to opt for longer contract types (e.g., two-year contracts) by offering incentives or discounts. Longer contracts can help reduce churn.
4. **Target Senior Citizens:** Implement special offers or packages aimed at retaining senior citizens, as they are more likely to churn. Provide services that cater to their needs and preferences.
5. **Payment Method Promotion:** Promote the use of bank withdrawal and credit card payments as these are the most popular payment methods. This can streamline billing processes and improve customer satisfaction.

6. **Contract Type Analysis:** Consider revising the terms and benefits of "Month-to-Month" contracts to make them more appealing to customers. Focus on improving customer retention for this contract type.
7. **Paperless Billing Improvements:** While paperless billing is convenient, work on enhancing the customer experience with it to reduce churn among customers who opt for paperless billing.
8. **Competitive Offers and Customer Support:** Address the issues related to better competitor offers and customer support. Enhance your service offerings to match or exceed those of competitors, and improve the professionalism and quality of customer support.
9. **Device Plans:** Develop attractive device protection plans to retain customers. Customers without device protection plans are more likely to churn, so providing value-added device protection can be beneficial.
10. **Population-Based Strategies:** Recognize that cities with higher populations have lower churn rates. Consider focusing marketing efforts on cities with lower populations to improve retention.
11. **Customer Survey:** Conduct customer satisfaction surveys to gather feedback on specific issues that may be contributing to churn. Use this feedback to make data-driven improvements.
12. **Dependents:** Although the dataset doesn't show a clear correlation between churn and the number of dependents, consider offering family-oriented packages or discounts to attract and retain customers with dependents.