



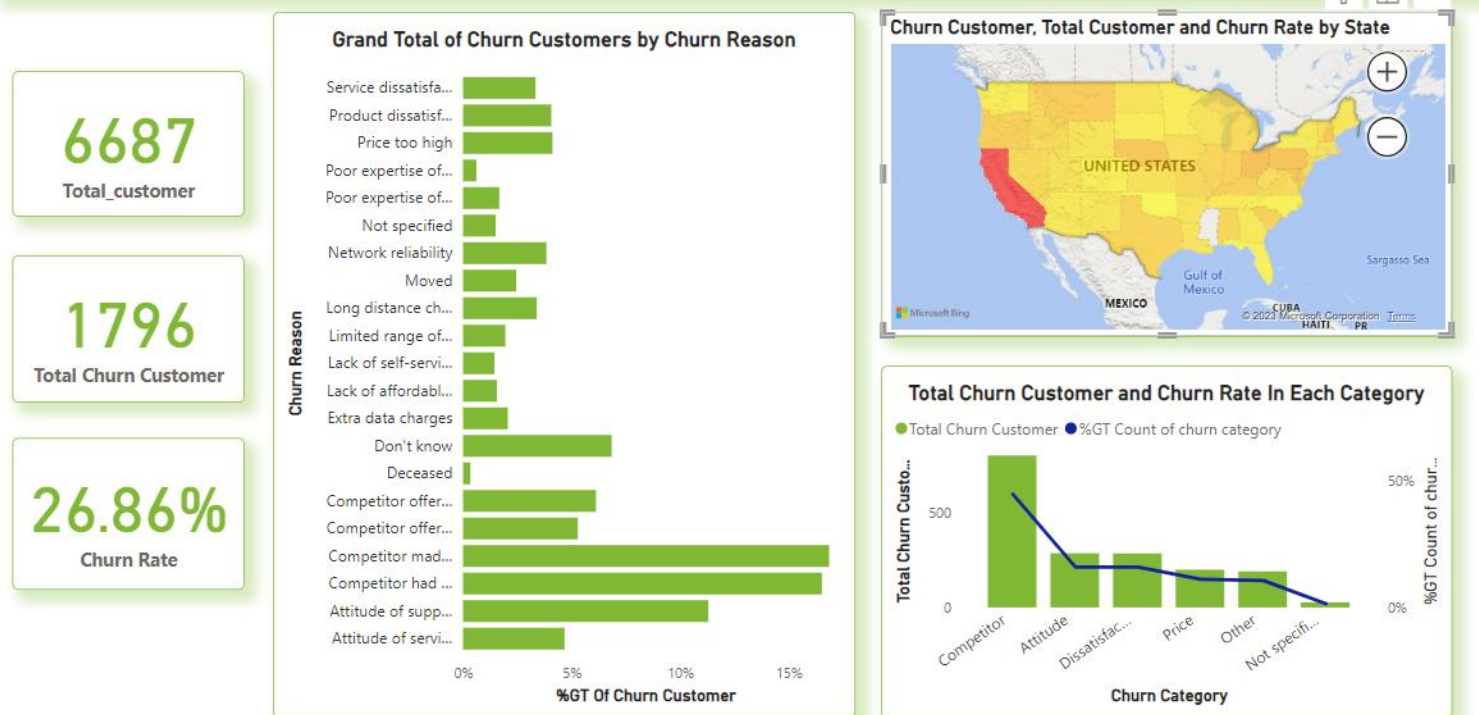
**Institute of
Emerging
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Churn Analysis Report

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DASHBOARD # 1

Overall Churn Data Insights of the Customers



Insight:

In this business, there are a total of 6,687 customers. Out of these, 26.86%, which is 1,796 customers, have decided to stop using our services during this period.

When we look closely at the reasons behind this churn, we find that 303 customers mentioned that they left because a competitor offered them a better deal, and 297 customers mentioned that they switched because the competitor had better devices.

What's interesting is that when we take a broader view, we see that the 'Competitor' category has the highest number of churned customers, with a total of 805 customers which is 44.82% out of the 1,796 who churned. That's almost half of the total churns.

The second and third most common reasons for customers leaving are 'Attitude' and 'Dissatisfaction,' with 287 and 286 churned customers, respectively with 15.98%.

As we examine our map, we notice that California has the highest rate of customers leaving our service, and it's quite significant at 63.24% shown in red color. On the other hand, Oklahoma has the lowest rate of customers leaving, and it's relatively low at 19.51% shown in yellow color.

DASHBOARD # 2

Demographic Data and the Consumption of Phone/Data Plans

Month-to-Month

46.29%

churn_rate

One Year

11.29%

churn_rate

Two Year

2.78%

churn_rate

Individual Plan

32.85%

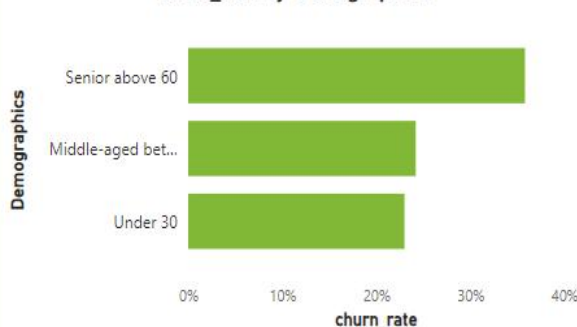
Churn Rate

Group Plan

6.51%

Churn Rate

churn_rate by Demographics



churn_rate and no_of_customer by Age bin

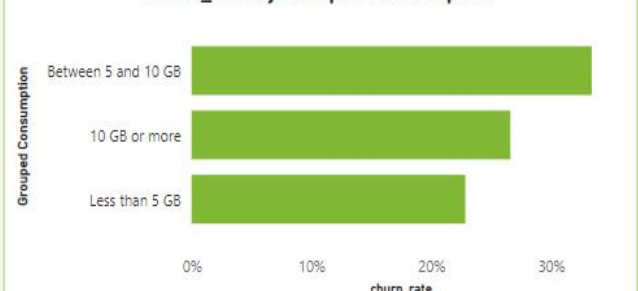


Average Monthly Charges by Group and Individual

No show the Individual plan and Yes show the group plan



churn_rate by Grouped Consumption



Insight:

When we looked at our customer demographics and their churn rates, we found something interesting. Among different age groups, the senior category, which includes people over 60 years old, had the highest churn rate at 35.82%. This means that a larger proportion of people in this age group chose to leave our service.

On the other hand, the age group under 30 had the lowest churn rate, which was only 23%. This suggests that younger customers are less likely to leave our service compared to seniors.

To dig deeper into this demographic analysis, we divided the age categories into smaller buckets. What we observed was that the pattern held true. Younger people had lower churn rates, with those under 25 having a churn rate of 21.53%. In contrast, those above 65 had a higher churn rate of 39.09%.

Additionally, also looked at the number of customers in each age bucket to get a more detailed picture of our customer base. found that the majority of our customers are aged between 25 and 35, totaling 1331 people. Interestingly, even though this group is the largest, they still have a lower rate of leaving our service, which is good news for us.

Another intriguing discovery is that customers who data consumption between 5 to 10 GB of data are more likely to leave our service, with a churn rate of 33.40%. In contrast, customers who use less than 5 GB have a lower churn rate of 22.85%, and those who use more than 10 GB have a churn rate of 26.51%.

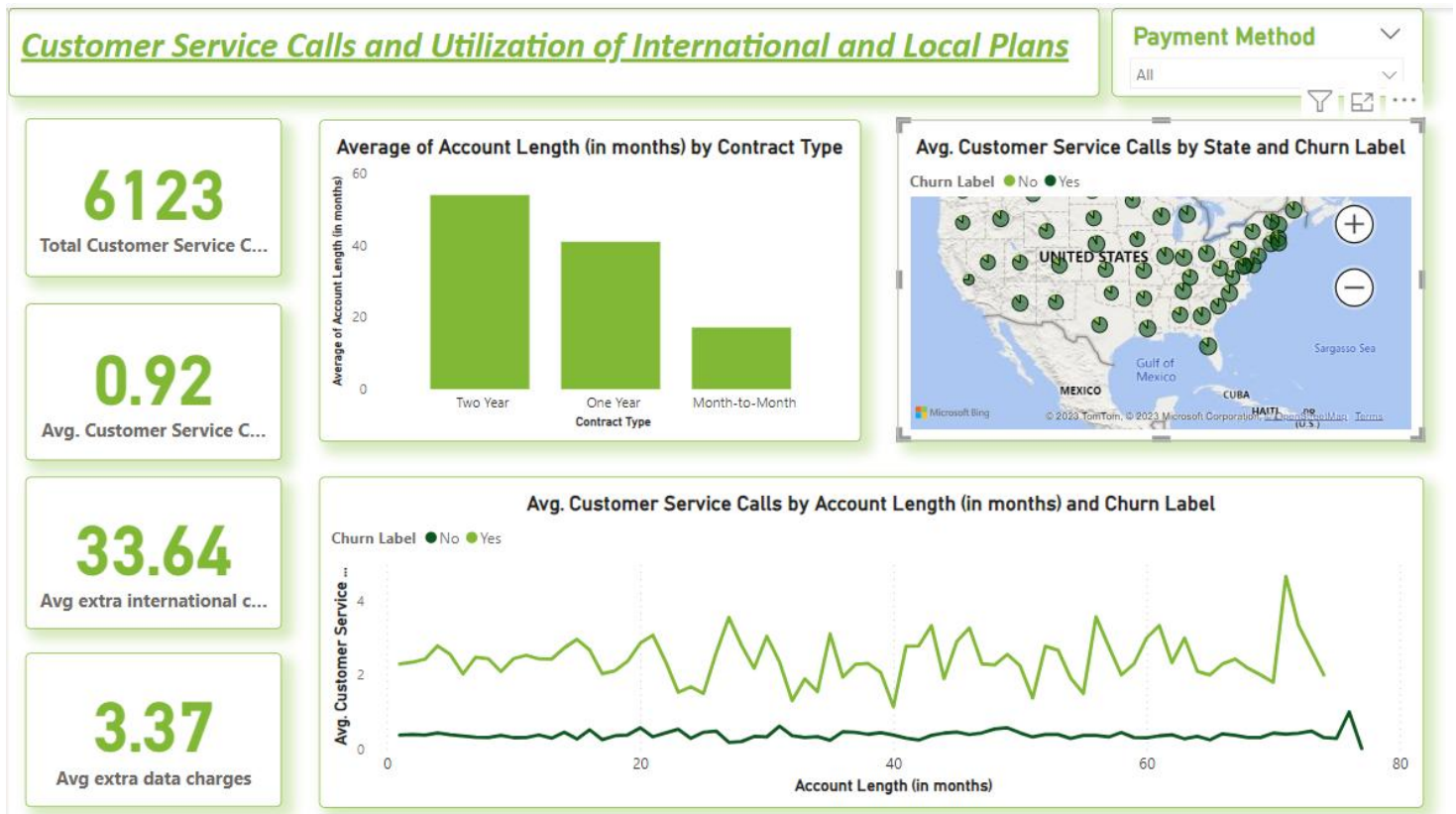
We noticed something interesting: Customers who choose our group plans have a very low churn rate of just 6.51%. This is significantly lower than the churn rate for customers who opt for individual plans, which is much higher at 32.85%.

The reason for this significant difference in churn rates is related to the average monthly charges. For group plans, the average monthly charges fall between \$22.50 and \$23.86, regardless of whether it's for a plan covering 2 members or 5 members. On the other hand, individual plans have much higher monthly charges, going as high as \$33.49.

This means that individual plan members are more likely to leave our service, possibly because they find the higher costs less appealing. In contrast, group plan members seem to be more satisfied with the lower monthly charges and are less likely to churn.

We've observed that customers who opt for a month-to-month contract are more prone to leaving our service, with a high churn rate of 46.29%. On the other hand, customers on yearly contracts have a lower churn rate of 11.29%, and those on two-year contracts exhibit the lowest churn rate at only 2.78%.

DASHBOARD # 3



Insight:

The total number of customer service calls received is 6,123, which is fewer than the total number of customers. On average, each person has made about 0.92 calls.

What's really interesting is that whether a customer is new or has been with us for a while, there's a noticeable pattern. Customers who leave (churn) tend to make fewer than 1 service call on average. In contrast, customers who stay with our company tend to make more than 2 service calls on average.

This pattern holds true in every state. Churned customers in each state, on average, make fewer than 1 service call, while customers who stay with us make 2 or more service calls on average.

On average, each customer pays about \$33.64 in extra charges for international usage, and they pay around \$3.37 in extra fees for using more data.

Recommendations based on the insights:

Competitor: We found that almost half (44.82%) of churn is attributed to competitors offering better deals and devices, it's crucial to evaluate plans and device offerings. Consider conducting competitive analysis regularly to **ensure your plans and devices remain competitive in the market.**

Customer Satisfaction: Second and third most customer churn reason are attitude and dissatisfaction 15.98% and 15.92% respectively. address issues related to 'Attitude' and 'Dissatisfaction' promptly. Invest in **improving customer service and overall customer experience** to reduce churn caused by these factors. Gather feedback and work on resolving customer complaints effectively.

Regional Focus: Observed California has the highest churn rate, which stands at a significant 63.24%. It's crucial to concentrate on enhancing customer retention efforts in California and investigate the reasons behind the high churn rate. Identify what may be going wrong in California, causing people to leave the service. Develop marketing and retention strategies tailored to address the unique needs and concerns of customers in this region.

Data Usage Awareness: Customers with moderate data consumption (5 to 10 GB) are more likely to churn. Consider offering customized plans or promotions to incentive these customers to stay. Also, educate customers about the value of their data usage to help them make informed decisions.

Group Plans Promotion: Promote group plans as they have a significantly lower churn rate. Highlight the cost savings and benefits of group plans in your marketing efforts to attract more customers to this option.

Contract Types: Encourage customers to choose longer-term contracts (yearly or two-year) to reduce churn. Consider offering incentives or discounts for customers who commit to longer contracts. Highlight the stability and potential cost savings associated with these plans.

Service Call Improvement: Analyze and improve your customer service and support processes to increase customer satisfaction and encourage them to stay. Focus on addressing issues efficiently and providing excellent customer service.

Extra Charges Transparency: Make sure that customers are well-informed about international charges and data usage fees to reduce surprises on their bills. Provide clear explanations and options for managing these charges.

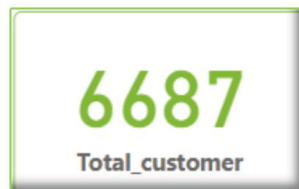
Process of Dashboard:

Create two measures and name them

- Number of Customers
- Number of Unique Customers

```
1 no_of_customer = COUNT('in'[Customer ID])
```

Explanation: created a measure in DAX that counts the number of customer IDs to find the total number of customers. Since customer IDs don't have duplicate values, there's no need to create a measure for the unique number of customers.



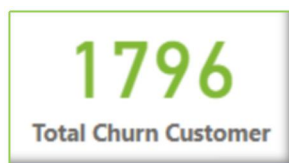
- Create a column called Churn Label to indicate if the customer has already churned or not “Yes” or “No”

Explanation: The dataset already contains a 'Churn Label' column that indicates whether a customer has churned or not, with 'Yes' or 'No' values. There's no need to create this column again.

- Create a measure of Number of Churned Customers.

```
1 no_of_churn_customer = COUNTROWS(FILTER ( 'in', 'in'[Churn Label] = "yes"))
```

Explanation: To determine the number of customers who have churned, simply filter the data using the 'Churn Label' column and count the rows where the 'Churn Label' is marked as 'Yes'.

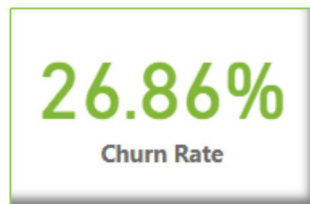


- Calculate the Churn Rate as percentage format.

```
1 churn_rate = DIVIDE( 'in'[no_of_churn_customer], 'in'[no_of_customer])
```

Explanation: To calculate the Churn Rate, just divide the 'Churn Customer' measure by the 'Total Number of Customers' measure that we previously created.

- Add the “Churn Rate” within a visualization and show it in the dashboard.



Explanation: To display the Churn Rate visually, use a card visualization with the 'Churn Rate' measure and format it as a percentage.

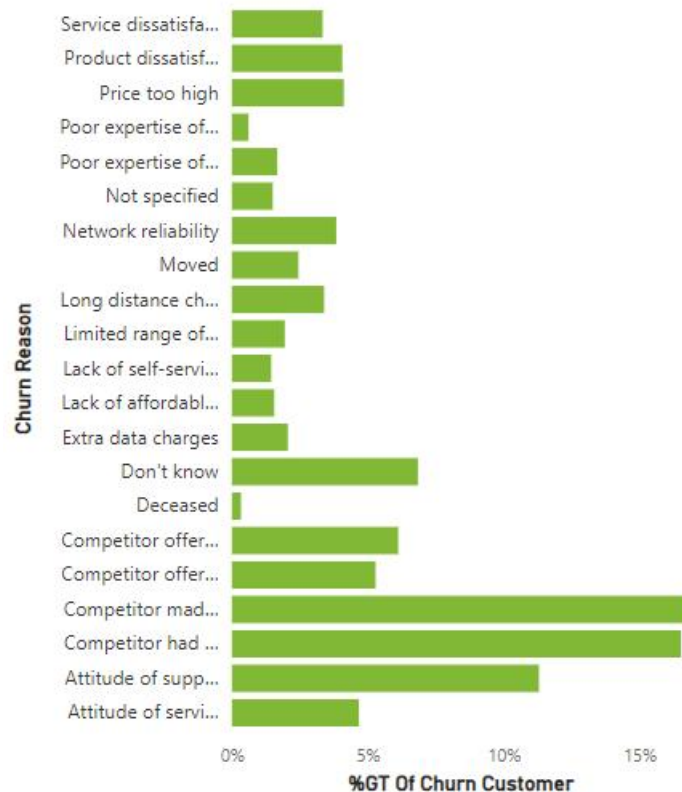
- Add a bar chart with Number of Customers and Churn Reason.
- Make sure to order the churn reason with descending order.
- Show the number of customer as “Percent of grand total”

```
1 Adjusted_churn_reason = IF('in'[Churn Label] = "YES" && (ISBLANK('in'[Churn Reason])), "Not specified", 'in'[Churn Reason])
```

Explanation: Before creating a bar chart for customer churn rates and reasons, I noticed some blank values in the churn reason column. This is normal when customers haven't churned and, therefore, have no specific reason for it. However, I also found blank values in the churn reason column for customers with a 'Churn Label' of 'Yes,' which indicates they've churned. To address this, I created a measure that checks if the 'Churn Label' is 'Yes' and the churn reason is blank, and in such cases, it substitutes 'Not specified' as the reason. For all other cases, it keeps the reason as it is.

Explanation: Create a bar chart that displays the number of customers as a percentage of the total customer count, and arrange the churn reasons in descending order.

Grand Total of Churn Customers by Churn Reason



- Create a visualization of your choice for churner by churn category.

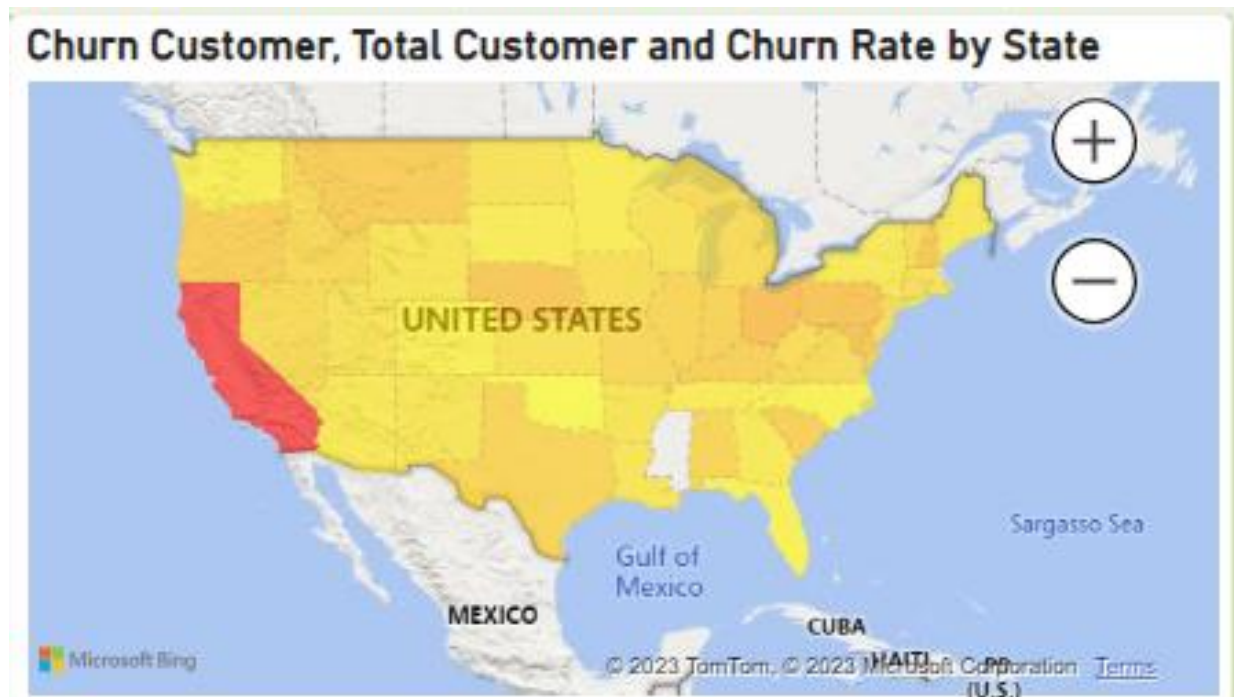
```
1 Adjusted churn category = IF('in'[Churn Label] = "YES" && ISBLANK('in'[Churn Category]), "Not specified", 'in'[Churn Category])
```

Explanation: Before creating a chart for customer churn rates and category, I noticed some blank values in the churn category column. This is normal when customers haven't churned and, therefore, have no specific churn category for it. However, I also found blank values in the churn category column for customers with a 'Churn Label' of 'Yes,' which indicates they've churned. To address this, I created a measure that checks if the 'Churn Label' is 'Yes' and the churn category is blank, and in such cases, it substitutes 'Not specified' as the reason. For all other cases, it keeps the reason as it is.

Total Churn Customer and Churn Rate In Each Category



- Add a map visualization with the following details churn rate, number of customers and number of churned customers by state.
- Use Gradient colors so that its easy to spot states with a high churn rate.



Explanation: I made a map that displays information about the number of customers in each state, the number of customers who stopped using our service (churned) in each state, and the rate at which customers are leaving (churn rate) in each state. To make it easy to understand, I used colors to highlight the churn rate. States with a lower churn rate are shown in yellow, while states with a higher churn rate are shown in red.

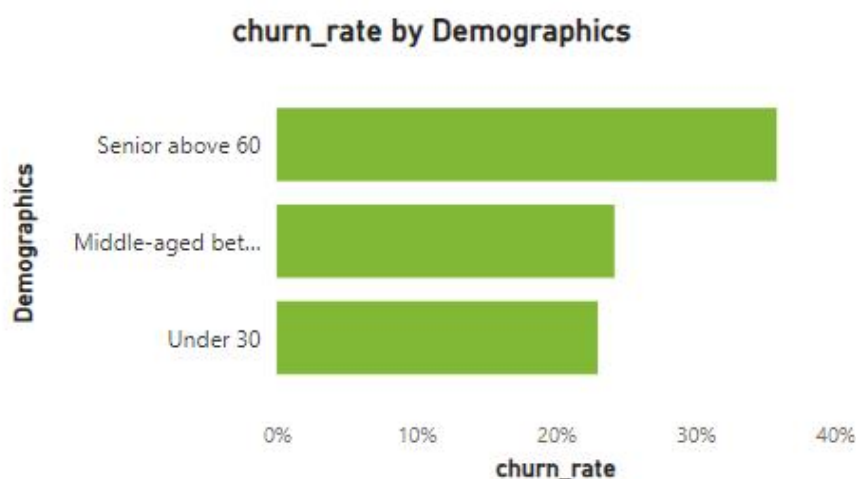
- Create a column called Demographics by creating age categories as “Under 30” “Senior” “Others” .

- Add any Visualization to analyze the churn rate for each categories

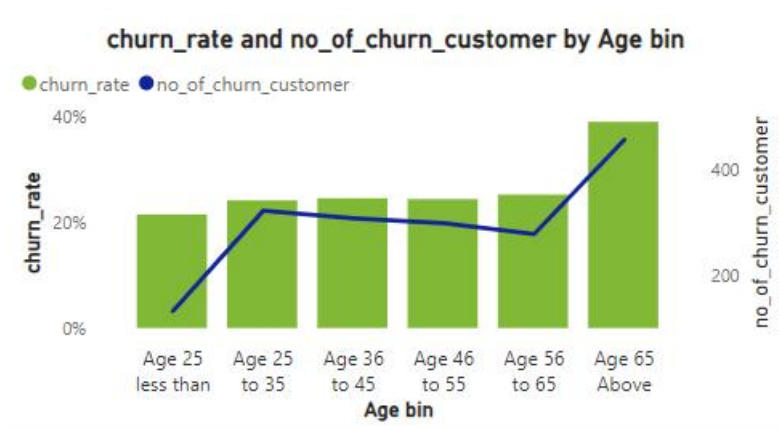
```
1 Demographics = SWITCH(TRUE(), 'in'[Age] < 30, "Under 30", 'in'[Age] > 60, "Senior above 60", "Middle-aged between 30 and 60")
```

Explanation:

Categorizes people into three groups based on their age: "Under 30," "Middle-aged between 30 and 60," or "Senior above 60."



- Create age bins such that “less than 25”, “Between 25 and 35”, “Above 60”.
- Add a line and stack chart column to show number of customers and churn rates by age bins.



Explanation: I used a switch function to make a new column that sorts people into different age groups. Then, I displayed the churn rate and the number of customers who left in a chart that shows both as columns stacked on top of each other.

- Change Monthly Charge to Currency. Create a graph for average monthly charge by customer group.



Explanation

On the horizontal axis, we display the number of customers, including those who are part of a group. The 'Yes' category represents customers who are in a group and indicates how many members are in each group. The 'No' category represents customers who have individual plans and do not belong to any group.

- Create a column called **Grouped Consumption** that classifies the average monthly GB download in the following groups:

- o Less than 5 GB
- o Between 5 and 10 GB
- o 10 GB or more

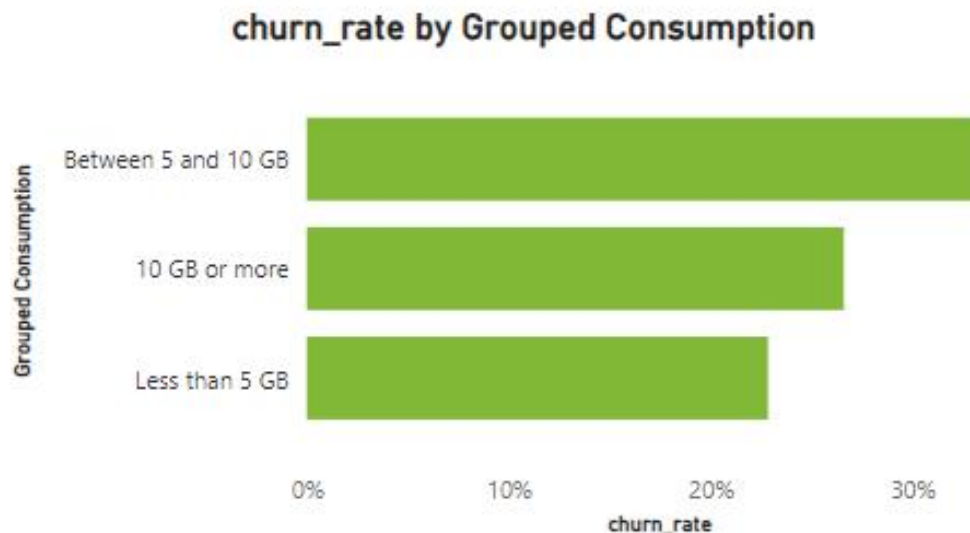
- Create a cluster bar chart of churn rate by group consumption's

```

1 Grouped Consumption =
2 IF(
3   'in'[Avg Monthly GB Download]< 5,
4   "Less than 5 GB",
5   IF(
6     'in'[Avg Monthly GB Download] >= 5 && 'in'[Avg Monthly GB Download] <= 10,
7     "Between 5 and 10 GB",
8     "10 GB or more"
9   )
10 )

```

Explanation: This code categorizes "Avg Monthly GB Download" values into three groups: "Less than 5 GB," "Between 5 and 10 GB," or "10 GB or more" based on their size.



Explanation: Add a new column to the data where we'll classify data usage into three categories based on our criteria. After that, we'll create a clustered bar chart to visually represent our findings.

- Show churn rates by intl plan and intl active on matrix at the same time add a map visualization to show state and province wise churn rate for intl plan .
- Create graph of total amount of customers who churn by each churn category and Total amount of customers by each contract types .

Intl Plan	No	Yes	Total
no	20.01%	40.34%	27.07%
yes	71.19%	7.59%	24.88%
Total	22.21%	34.31%	26.86%



- Create a graph of average monthly charge and churn rate by group plans
- Create a slicer for account length



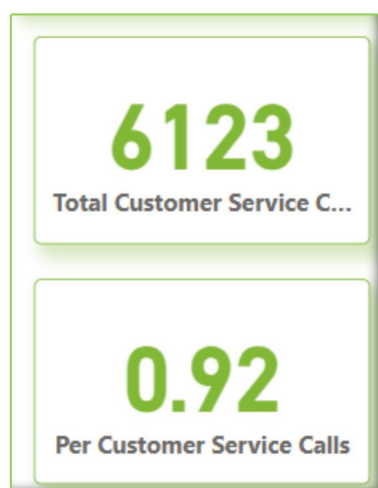
Explanation:

On the horizontal axis, we display the number of customers, including those who are part of a group. The 'Yes' category represents customers who are in a group and indicates how many members are in each group. The 'No' category represents customers who have individual plans and do not belong to any group.

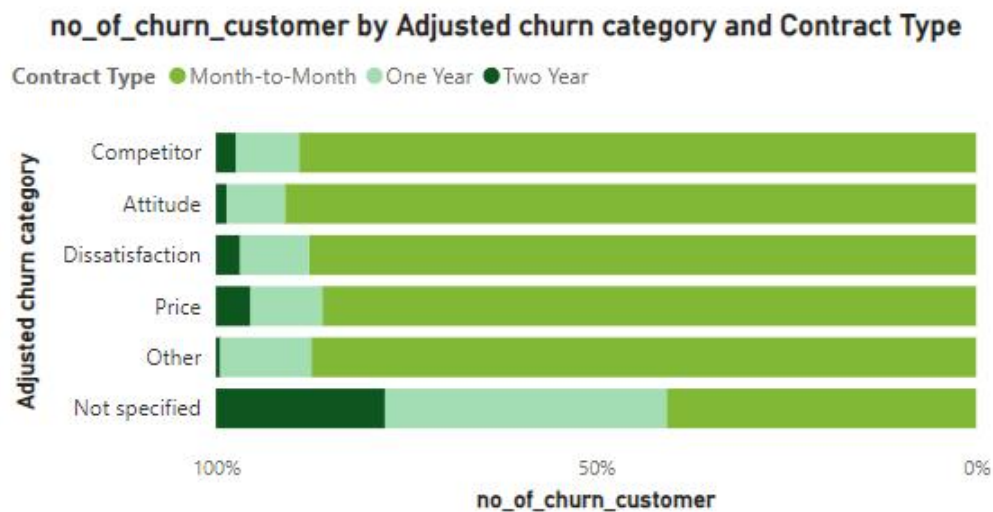
- Create a measure to calculate the average customer service calls per customer name the measures as Avg. Customer Service Calls

```
1 Avg. Customer Service Calls = AVERAGE('in'[Customer Service Calls])
```

- Add two cards with total customer service calls and average customer service calls



- Add a scatterplot to add average account length by contract categories. To see a specific result by contract category and payment method add a slicer to analyze specific results



Explanation:

When I attempted to create a scatter plot, I noticed that it only displayed three dots for the average account length. This limited representation didn't provide a clear picture of the data. As a result, I decided to create a stacked bar chart instead.

Add to new measures avg extra international charges and avg extra data charges create the structure such that For example - $\text{sum}() / \text{total number of customers}$

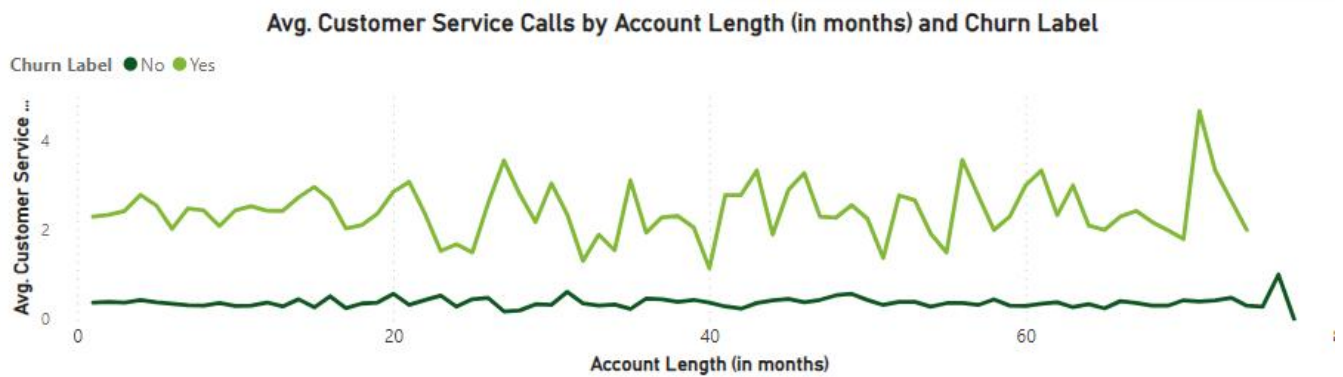
```
1 Avg extra international charges = DIVIDE( SUM('in'[Extra International Charges]), 'in'[no_of_customer])
```

```
1 Avg extra data charges = DIVIDE( SUM('in'[Extra Data Charges]) , 'in'[no_of_customer])
```

- Add two cards to analyze both the measures created in the previous points.



- Create a line chart for churn label and avg customer service calls measure created earlier



Explanation: To meet our needs, we'll create a line chart that includes a 'Churn' label and an 'Average Customer' series. Line graphs work well for showing changes over time, so we'll also include 'Account Length' to provide more detailed insights and reach our goal.

- Add other mapping visualization to understand the avg customer calls by states and churn labels.

