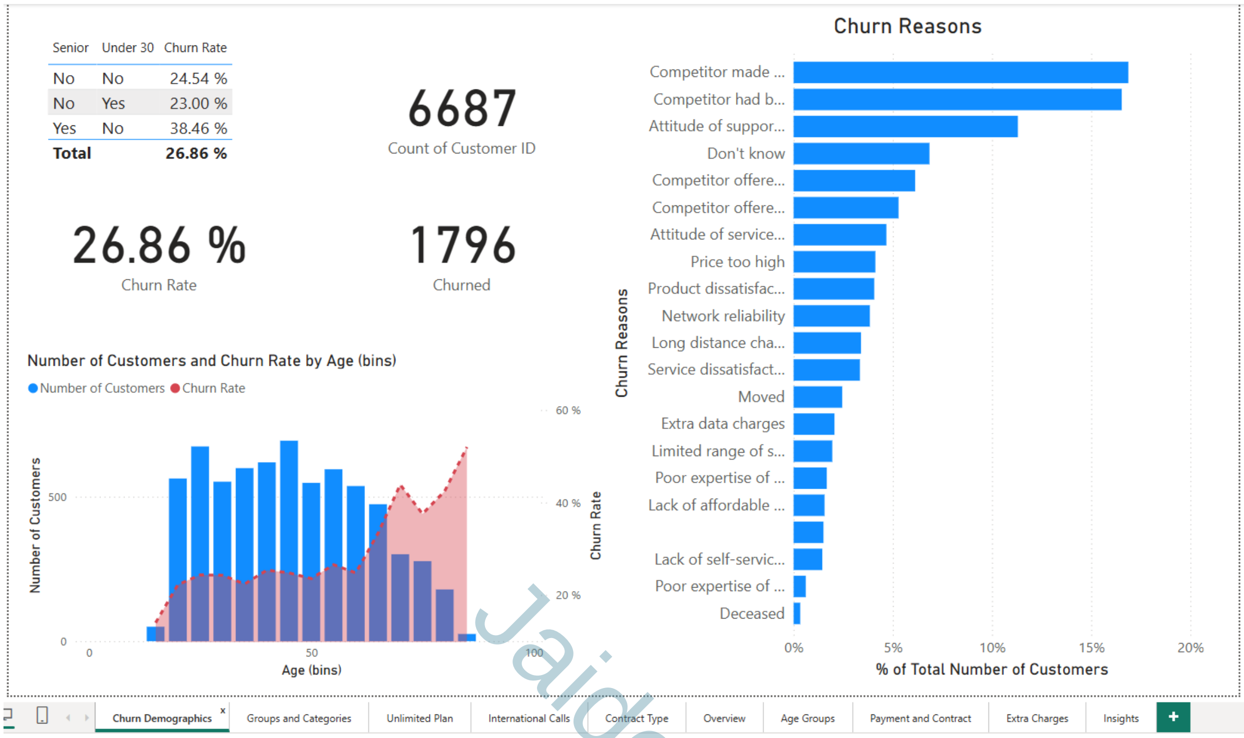
Analyzing Customer Churn

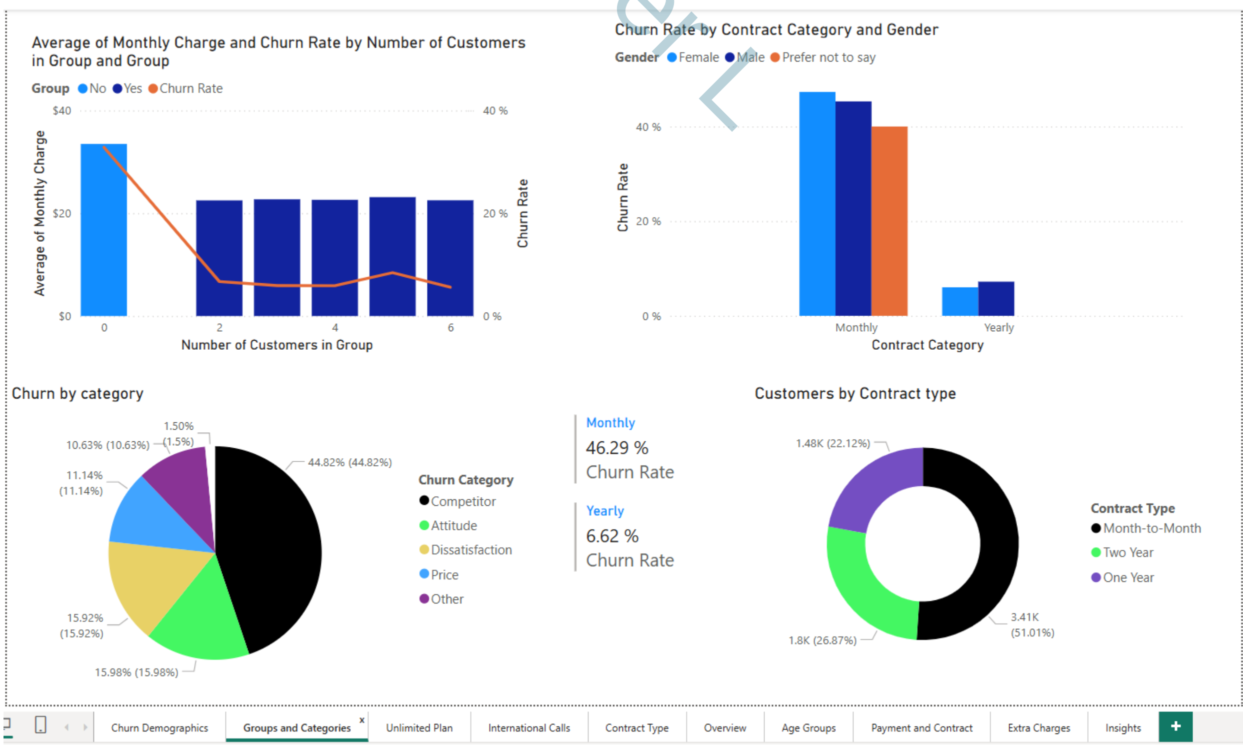
This Power BI project is a case study in data analysis, aimed at discovering why customers from a fictitious Telecom provider are churning.

The churn rate is the rate at which customers stop doing business with a company.

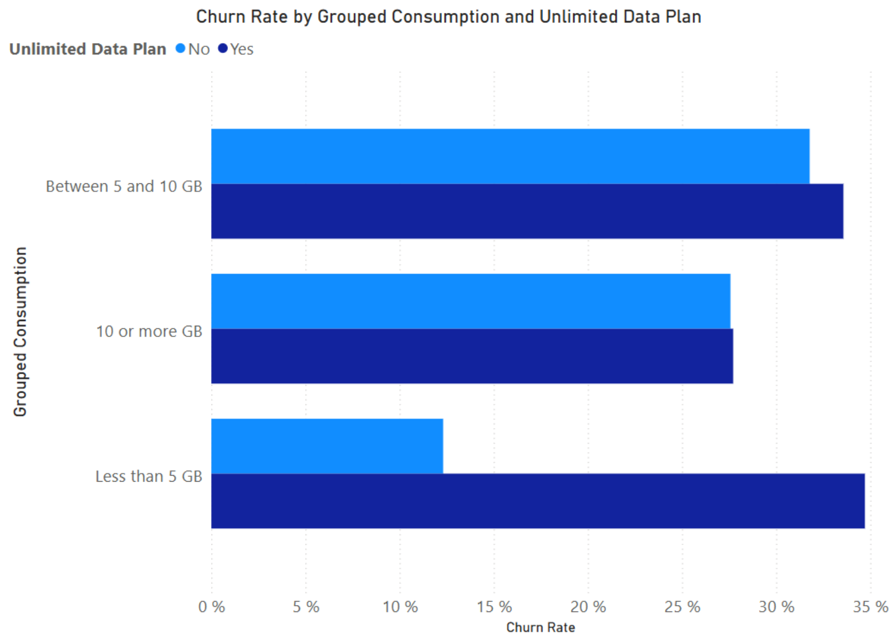
It is important for companies to retain their customers and keeping them is usually cheaper than getting new ones.

The Dashboard





Churn Rate	Number of Customers	Unlimited Data Plan
16.10 %	2193	No
32.11 %	4494	Yes
26.86 %	**6687**	



Churn Demographics | Groups and Categories | **Unlimited Plan** | International Calls | Contract Type | Overview | Age Groups | Payment and Contract | Extra Charges | Insights | +

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

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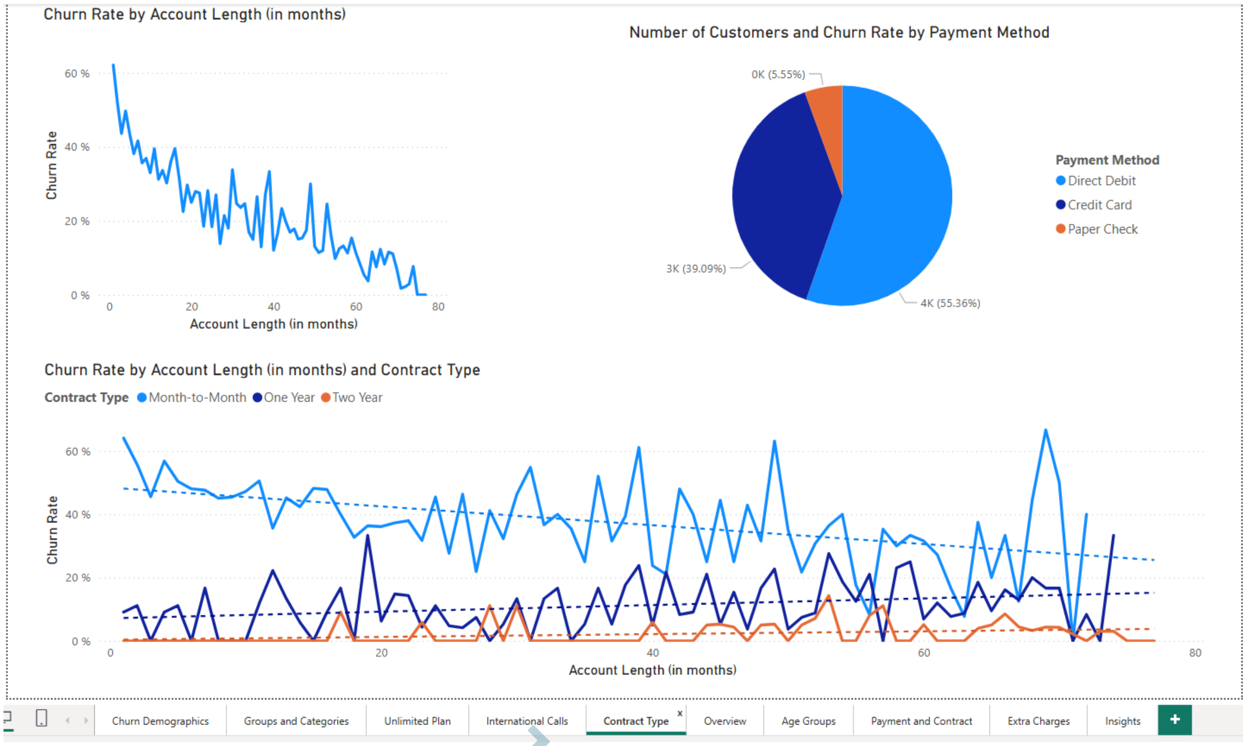

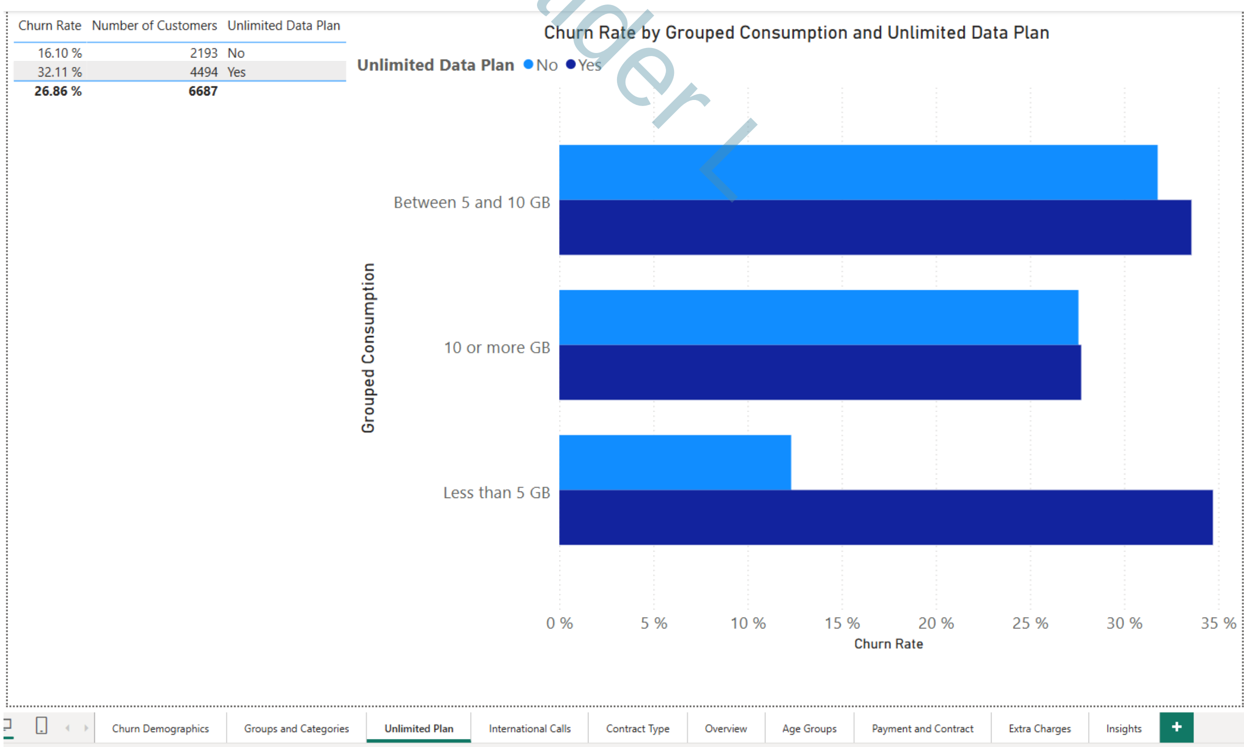

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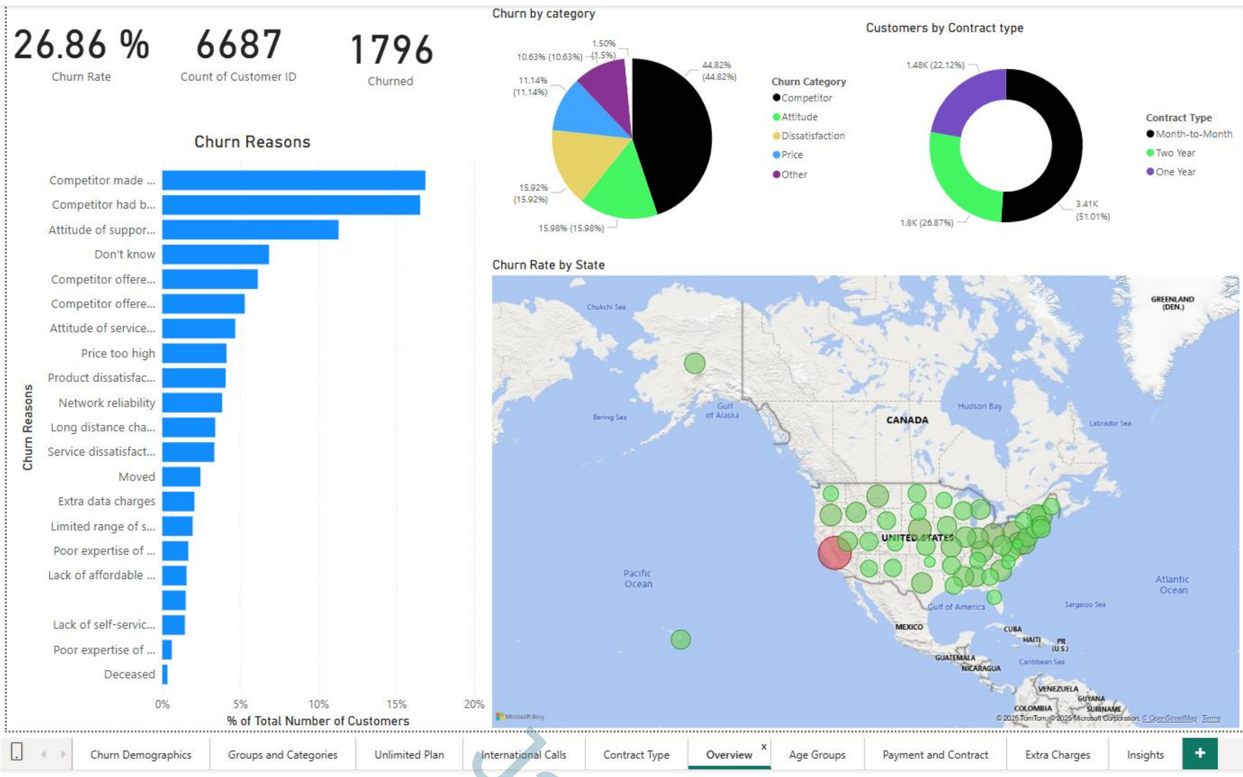
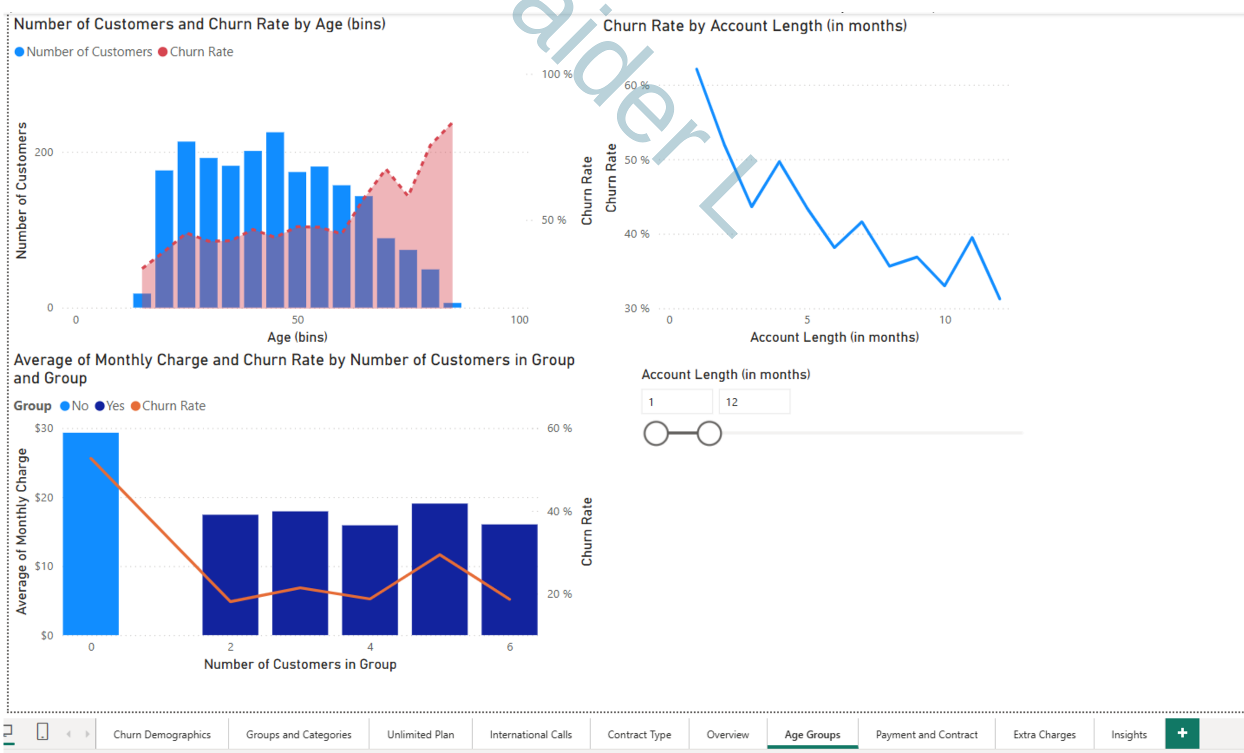
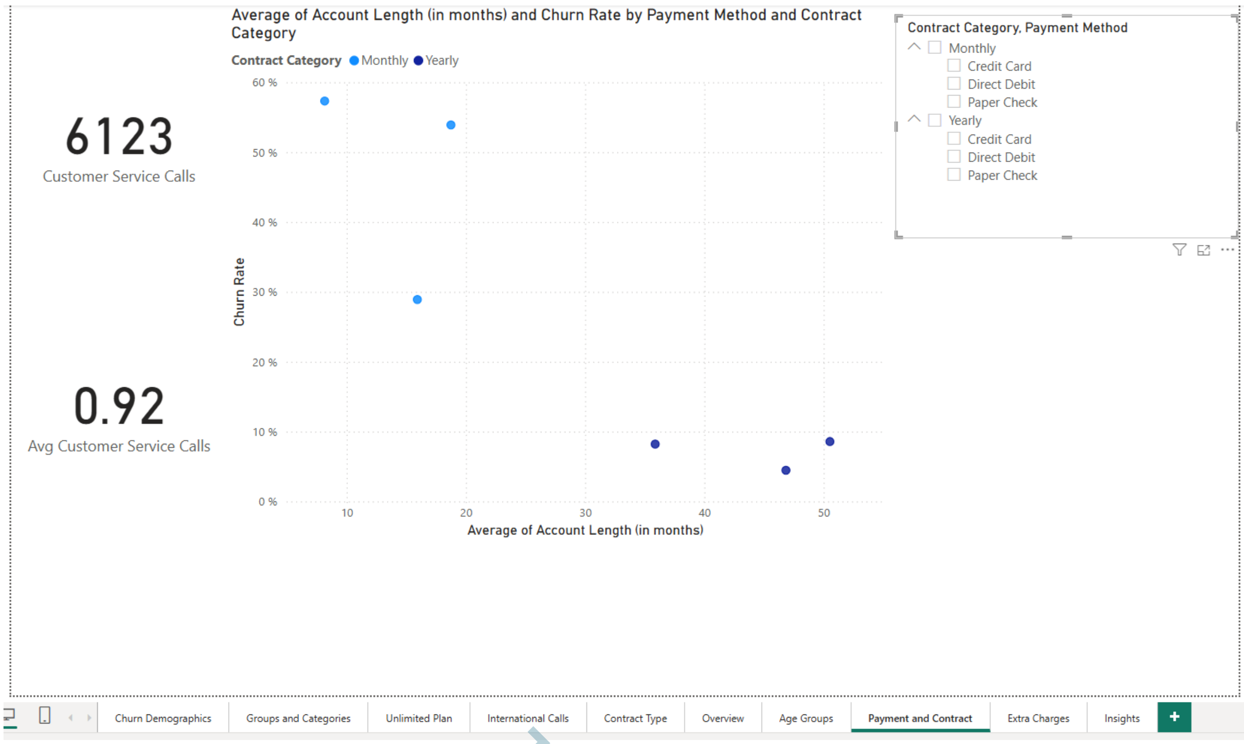

26.86 %
Churn Rate
6687
Count of Customer ID
1796
Churned
Churn Reasons
Competitor made ...
Competitor had b...
Attitude of suppor...
Don't know
Competitor offere...
Competitor offere...
Attitude of service...
Price too high
Product dissatisfac...
Network reliability
Long distance cha...
Service dissatisfact...
Moved
Extra data charges
Limited range of s...
Poor expertise of ...
Lack of affordable ...
Lack of self-servic...
Poor expertise of ...
Deceased
Churn Reasons
0%
5%
10%
15%
20%
% of Total Number of Customers
Churn by category
Churn Category
Competitor
Attitude
Dissatisfaction
Price
Other
44.82% (44.82%)
15.98% (15.98%)
15.92% (15.92%)
11.14% (11.14%)
10.63% (10.63%)
1.50% (1.5%)
Customers by Contract type
Contract Type
Month-to-Month
Two Year
One Year
1.48K (22.12%)
1.8K (26.87%)
3.41K (51.01%)
Churn Rate by State
CANADA
UNITED STATES
MEXICO
Pacific Ocean
Atlantic Ocean
Hudson Bay
Gulf of Alaska
Gulf of America
GREENLAND (DEN.)
Churn Demographics
Groups and Categories
Unlimited Plan
International Calls
Contract Type
Overview
Age Groups
Payment and Contract
Extra Charges
Insights


Number of Customers and Churn Rate by Age (bins)
Number of Customers
Churn Rate
Number of Customers
200
0
0
50
100
Age (bins)
100 %
50 %
Churn Rate
Churn Rate by Account Length (in months)
Churn Rate
60 %
50 %
40 %
30 %
0
5
10
Account Length (in months)
Account Length (in months)
1
12
Average of Monthly Charge and Churn Rate by Number of Customers in Group and Group
Group
No
Yes
Churn Rate
Average of Monthly Charge
$30
$20
$10
$0
0
2
4
6
Number of Customers in Group
60 %
40 %
20 %
Churn Rate
Churn Demographics
Groups and Categories
Unlimited Plan
International Calls
Contract Type
Overview
Age Groups
Payment and Contract
Extra Charges
Insights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Customer Service Calls
0.92
Avg Customer Service Calls
Average of Account Length (in months) and Churn Rate by Payment Method and Contract Category
Contract Category Monthly Yearly
Churn Rate
60 %
50 %
40 %
30 %
20 %
10 %
0 %
10
20
30
40
50
Average of Account Length (in months)
Contract Category, Payment Method
Monthly
Credit Card
Direct Debit
Paper Check
Yearly
Credit Card
Direct Debit
Paper Check
Churn Demographics
Groups and Categories
Unlimited Plan
International Calls
Contract Type
Overview
Age Groups
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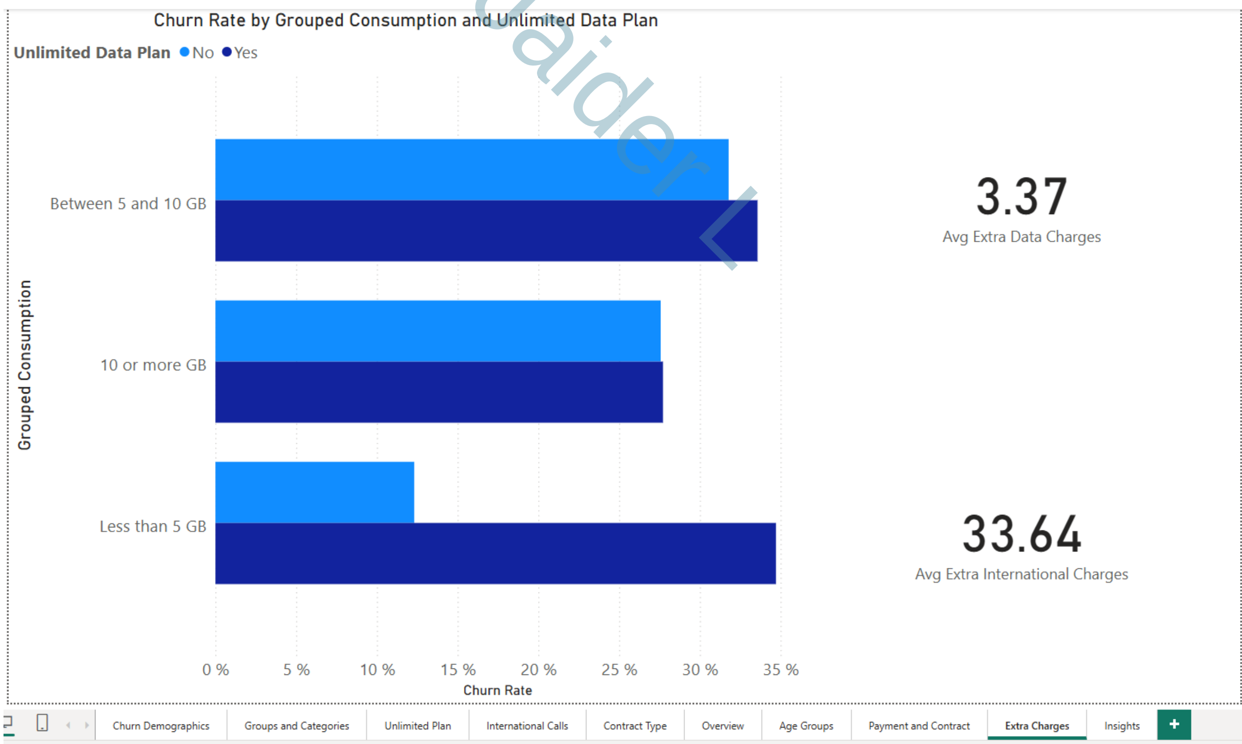
Churn Rate by Grouped Consumption and Unlimited Data Plan
Unlimited Data Plan No Yes
Grouped Consumption
Between 5 and 10 GB
10 or more GB
Less than 5 GB
0 %
5 %
10 %
15 %
20 %
25 %
30 %
35 %
Churn Rate
3.37
Avg Extra Data Charges
33.64
Avg Extra International Charges
Churn Demographics
Groups and Categories
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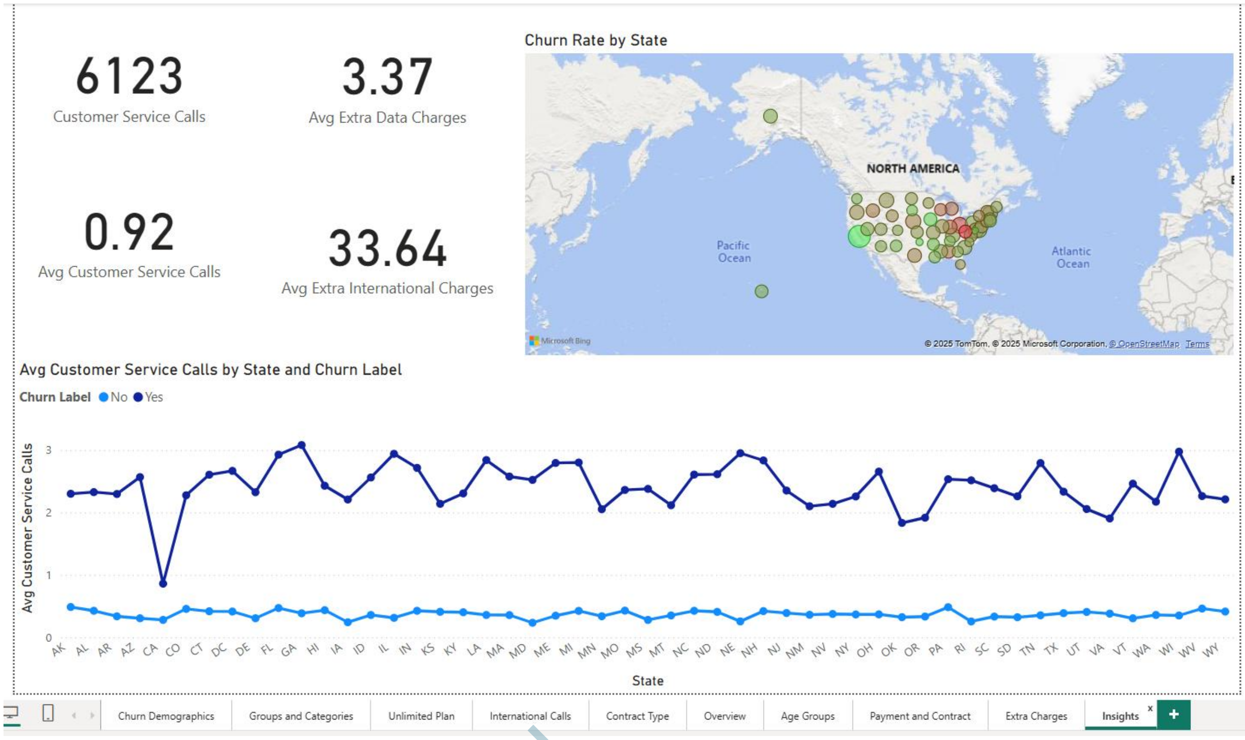
6123
Customer Service Calls
3.37
Avg Extra Data Charges
0.92
Avg Customer Service Calls
33.64
Avg Extra International Charges
Churn Rate by State
NORTH AMERICA
Pacific Ocean
Atlantic Ocean
Avg Customer Service Calls by State and Churn Label
Churn Label No Yes
Avg Customer Service Calls
State
AK AL AR AZ CA CO CT DC DE FL GA HI IA ID IL IN KS KY LA MA MD ME MI MN MO MS MT NC ND NE NH NJ NM NV NY OH OK OR PA RI SC SD TN TX UT VA VT WA WI WV WY
Churn Demographics
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International Calls
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Most Relevant Findings

1. The churn rate for this Telecom company is ~27%.

2. Over 44% of the reasons why customers churn is related to competitors.

3. The churn rate in California is abnormally high (above 63%) but not related to customer services (lowest volume of service calls in the country).

4. The churn rate is higher for new accounts (~62%), dropping to half after 18 months

5. Customers of a Month-to-Month contract type have significantly higher churn rates than those committed in one year or two years contracts.

Actionable Insights

- 44% of churn is driven by competitors offers. To remain competitive, the company should proactively launch new services and benefits to attract and retain customers. Special attention should be given to high-churn segments, such as customers in California and those over 50.
- Promote exclusive product discounts to customers on month-to-month contracts to encourage conversion to long-term commitments.