



# INNOMATICS

RESEARCH LABS

## Power BI Project : Customer Churn Analysis

Dear Innominion,

Congratulations on completing your Power BI journey! It's time to take the next step and turn insights into real-world impact. Let's dive into project-based learning and showcase your skills with data storytelling!

### Data Source

👉 Kindly click on the [Dataset](#) to check and download

### Data Description

**customerID** – Unique identifier for each customer.

**gender** – Gender of the customer (Male or Female).

**SeniorCitizen** – Indicates whether the customer is a senior citizen (1 = Yes, 0 = No).

**Partner** – Specifies if the customer has a partner (Yes or No).

**Dependents** – Specifies if the customer has dependents (Yes or No).

**tenure** – Number of months the customer has stayed with the company.

**PhoneService** – Indicates if the customer has phone service (Yes or No).

**MultipleLines** – Shows whether the customer has multiple phone lines.

**InternetService** – Type of internet service (DSL, Fiber optic, or No).

**OnlineSecurity** – Indicates if the customer has subscribed to online security.

**OnlineBackup** – Indicates if the customer has subscribed to online backup.

**DeviceProtection** – Shows if the customer has device protection service.

**TechSupport** – Indicates if the customer has technical support service.

**StreamingTV** – Shows whether the customer streams TV through the service.

**StreamingMovies** – Shows whether the customer streams movies through the service.

**Contract** – Type of contract the customer is on (Month-to-month, One year, Two year).

**PaperlessBilling** – Indicates if the customer uses paperless billing (Yes or No).

**PaymentMethod** – Method used by the customer to make payments.

**MonthlyCharges** – The monthly fee charged to the customer.

**TotalCharges** – The total charges incurred by the customer to date.

**Churn** – Indicates whether the customer has churned (Yes or No).



## **Reporting Instruction:**

Try to create reports that include a variety of visual elements such as **cards, bar charts, column charts, scatter plots, waterfall charts, funnel charts, slicers, tables, matrix visuals, pie/donut charts, boxplots etc** wherever applicable to make the analysis more interactive and insightful.



## **Additional Note:**

*If you have space in your dashboard, feel free to add extra cards, slicers, or any other relevant visuals. You are encouraged to create your own questions and insights beyond the ones provided. There is no rule that you must stick only to the given questions, explore and expand creatively.*

# Analysis Questions

## 1. Customer Demographics Analysis

1. What is the proportion of male and female customers?
  2. How many senior citizens have churned compared to those who haven't?
  3. How are customers segmented across different tenure ranges?
  4. How does the churn rate differ across various tenure segments?
  5. Does the average monthly charge increase with higher tenure?
  6. What is the relationship between monthly charges and tenure, segmented by gender?
  7. Show key customer metrics (total customers, churned customers, churn rate, avg. monthly charges, avg. tenure) with interactive filters for gender and contract type.
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## 2. Service Subscription Analysis

1. How many customers are subscribed to phone service, and how many are not?
2. What is the churn rate across different types of internet services (DSL, Fiber optic, No internet)?
3. Which add-on services are most commonly used by customers who churned?
4. Is there a correlation between the number of subscribed services and the likelihood of churn?
5. What combination of services is most associated with customer churn?
6. How many customers use fiber optic vs DSL vs no internet? What's their churn rate?
7. Compare service usage and churn behavior with filters for gender, senior citizen status, internet service type, and contract type. Display total churned customers and churn rate

### 3. Contract & Billing Insights

1. How does the churn rate differ by contract type (Month-to-month, One year, Two year)?
  2. What is the distribution of churn across different payment methods?
  3. What is the average total charge for each type of contract?
  4. How do monthly charges differ across various payment methods?
  5. Is there a relationship between paperless billing and customer churn?
  6. How is customer tenure distributed for each contract type?
  7. Show key billing metrics (avg. monthly charges, avg. total charges, churn rate, total churned customers) with filters for contract type and payment method.
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### 4. Churn Prediction & Key Drivers

1. What is the overall churn rate in the customer base?
2. Which factors have the strongest influence on customer churn?
3. Which customer segments show the highest likelihood of churning?
4. What is the revenue impact of retained versus lost customers?
5. How is the AI-generated churn risk score distributed across customers?
6. In which segments is churn most concentrated based on multiple factors?