

# Power BI and Tableau Dashboards Preview on Telco Customer Churn Analysis

Authored by Shek Yu Wong, on June 3, 2025

Power BI:

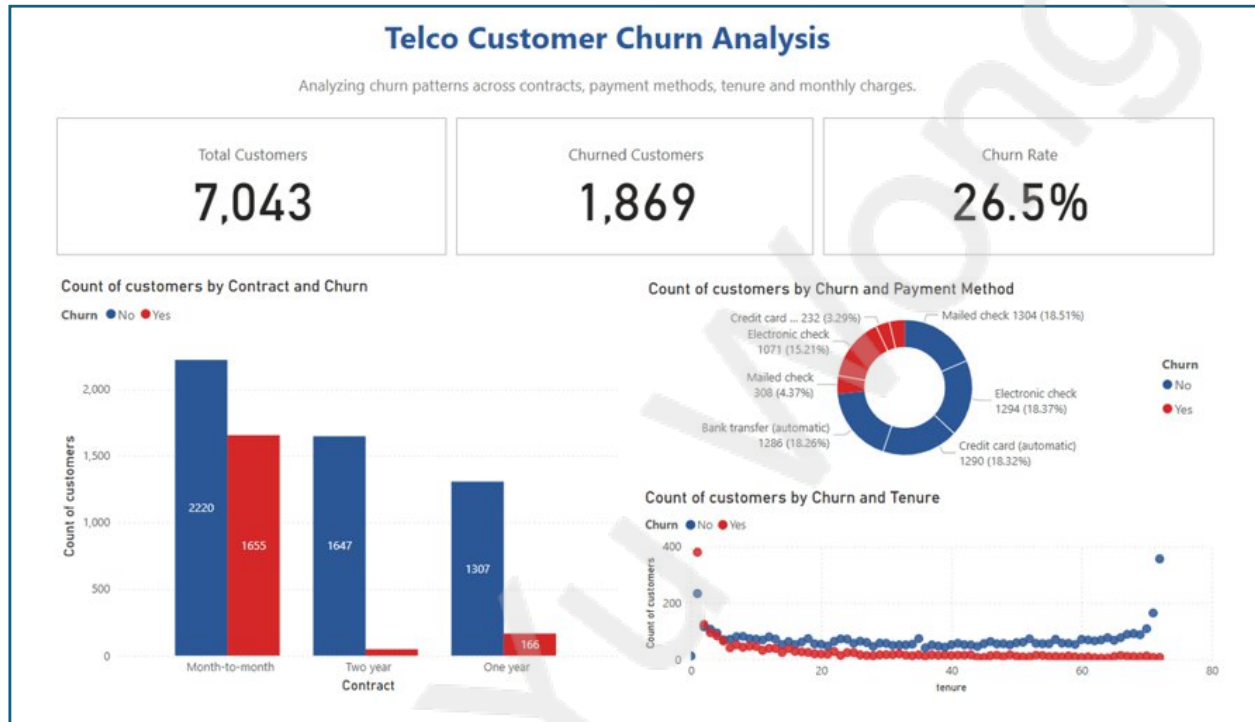
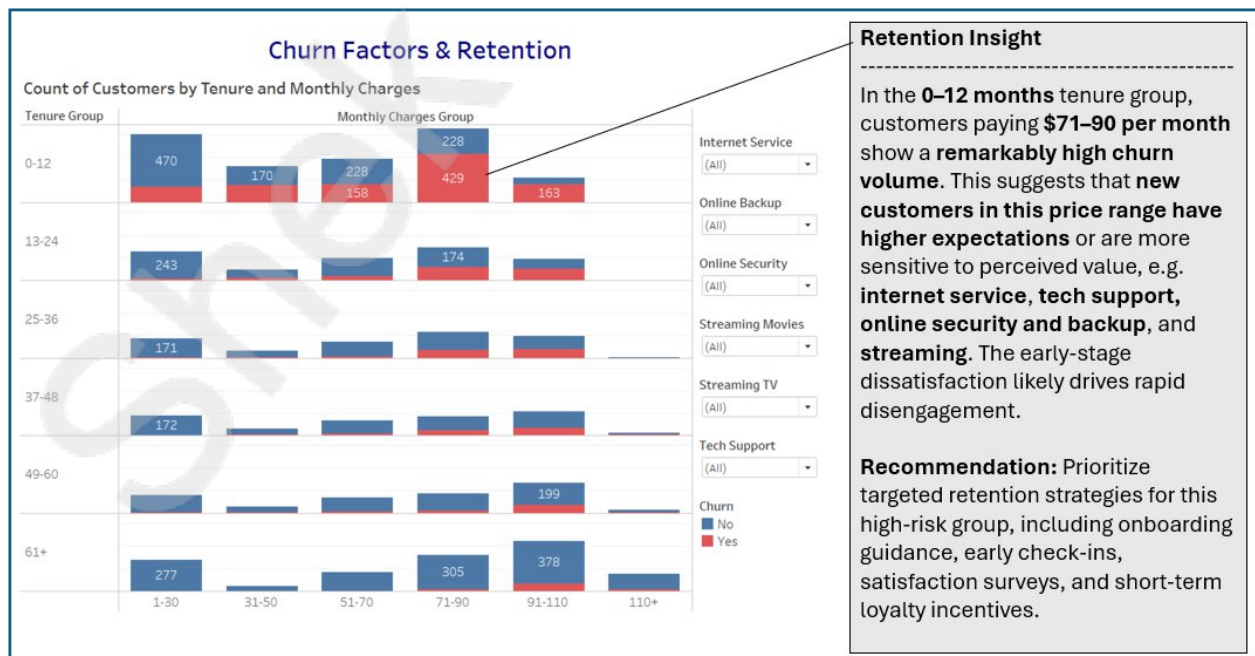


Tableau:





# Telco Customer Churn Analysis

## POWER BI AND TABLEAU DASHBOARD FULL REPORT

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**Date:** June 3, 2025

**Tools Used:**

IBM Telco Customer Churn Dataset,  
Power BI, DAX, Power Query,  
Tableau Public, Calculated Fields, Custom Groups

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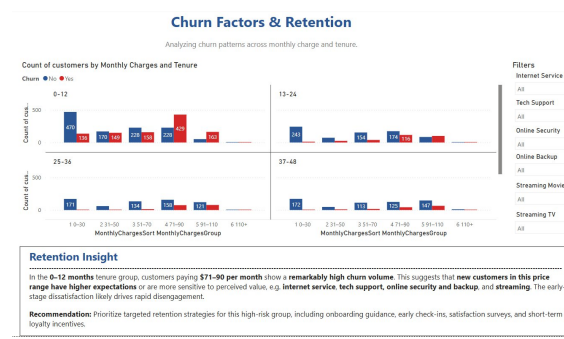
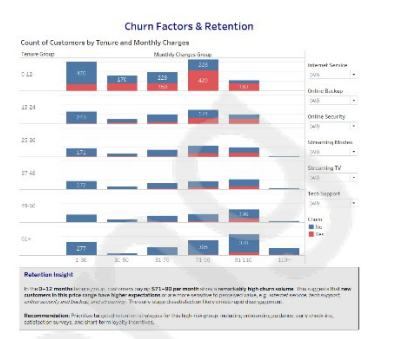
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# Power BI and Tableau Dashboards






This section showcases a side-by-side preview of churn analysis dashboards built with Power BI and Tableau using a telco customer churn dataset.

|                              |  |
|------------------------------|--|
| <b>Project Overview</b>      | Analyze customer churn behavior in a telecom company using Power BI and Tableau dashboards   |
| <b>Data Source</b>           | IBM Telco Customer Churn Dataset (~7,000 records, 21 columns)  |
| <b>GitHub Link</b>           | <a href="https://github.com/stephensyw/telecom-churn-dashboard">https://github.com/stephensyw/telecom-churn-dashboard</a>  |
| <b>Demonstrated Skillset</b> | <ul style="list-style-type: none"> <li>Data Cleaning &amp; Preparation (Power Query / Tableau Prep)</li> <li>Data Modeling &amp; DAX (Power BI)</li> <li>Calculated Fields &amp; LOD Expressions (Tableau)</li> <li>Dashboard Design for Executive Readability</li> <li>Churn Analysis &amp; KPI Tracking</li> <li>Storytelling with Data Visualization</li> <li>GitHub Documentation &amp; Version Control</li> </ul> |

|   | Power BI  | Tableau   |
|---|---|---|
| Page 1:<br>Churn Overview                       | <p><b>Telco Customer Churn Analysis</b><br/>Analyzing churn patterns across contracts, payment methods, tenure and monthly charges.</p> <p>Total Customers: 7,043   Churned Customers: 1,869   Churn Rate: 26.5%</p> <p>Count of customers by Contract and Churn</p> <p>Count of customers by Churn and Payment Method</p> <p>Count of customers by Churn and Tenure</p>  | <p><b>Telco Customer Churn Analysis</b></p> <p>Total Customers: 7,043   Churned Customers: 1,869   Churn Rate: 26.5%</p> <p>Count of Customers by Contract</p> <p>Count of Customers by Payment Method</p> <p>Count of Customers by Tenure</p>                |
| Page 2:<br>Customer Profile & Service Breakdown | <p><b>Customer Profile &amp; Service</b><br/>Analyzing churn patterns across gender, dependents, internet service, online security and tech support.</p> <p>Count of customers by Gender</p> <p>Count of customers by Dependents</p> <p>Count of customers by Internet Service</p> <p>Count of customers by Online Security</p> <p>Count of customers by Tech Support</p> | <p><b>Customer Profile &amp; Service</b></p> <p>Count of Customers by Gender</p> <p>Count of Customers by Dependents</p> <p>Count of Customers by Internet Service</p> <p>Count of Customers by Online Security</p> <p>Count of Customers by Tech Support</p> |

|  | Power BI   | Tableau  |
|--|--|--|
| Page 3:<br>Churn Factors<br>& Retention In<br>sights |  <p><b>Churn Factors &amp; Retention</b><br/>Analyzing churn patterns across monthly charge and tenure.</p> <p>Count of customers by Monthly Charges and Tenure</p> <p>Churn: ● No ● Yes</p> <p>Retention Insight</p> <p>In the 0-12 months tenure group, customers paying \$71-90 per month show a remarkably high churn volume. This suggests that new customers in this price range have higher expectations or are more sensitive to perceived value, e.g. internet service, tech support, online security and backup, and streaming. The early stage dissatisfaction likely drives rapid disengagement.</p> <p>Recommendation: Prioritize targeted retention strategies for this high-risk group, including onboarding guidance, early check-ins, satisfaction surveys, and short-term loyalty incentives.</p> |  <p><b>Churn Factors &amp; Retention</b><br/>Count of Customers by Tenure and Monthly Charges</p> <p>Churn: ● No ● Yes</p> <p>Retention Insight</p> <p>In the 0-12 months tenure group, customers paying \$71-90 per month show a remarkably high churn volume. This suggests that new customers in this price range have higher expectations or are more sensitive to perceived value, e.g. internet service, tech support, online security and backup, and streaming. The early stage dissatisfaction likely drives rapid disengagement.</p> <p>Recommendation: Prioritize targeted retention strategies for this high-risk group, including onboarding guidance, early check-ins, satisfaction surveys, and short-term loyalty incentives.</p> |

## Visualization Pages (Dashboard Structure)

- Overview** – Executive snapshot of churn KPIs segmented by contract type, payment method, and tenure
  -  **Highest churn segments**
    - Customers on **month-to-month contracts**
    - Customers paying via **electronic check**
  -  **Retention trend**
    - Longer tenure generally correlates with lower churn
- Customer Profile & Service** – Demographics and service usage patterns
  -  **At-risk customer profiles**
    - Customers **without dependents**
    - Customers using **fiber optic** instead of DSL
    - Customers **without tech add-on services** (e.g., security, backup)
- Churn Drivers & Retention** – Key factors and recommendations
  -  **High churn factors**
    - Monthly charges **\$71–90** → highest churn volume
    - New customers (**0–12 months**) most vulnerable
    - Early dissatisfaction indicators → signal need for engagement
  -  **Recommended actions**
    - Strengthen onboarding guidance
    - Conduct early satisfaction check-ins
    - Deploy quick surveys to capture feedback
    - Offer short-term loyalty incentives

**Note:** Full dashboard pages are available upon request.