PREDICTING CUSTOMER CHURN IN TELECOM INDUSTRY

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INTRODUCTION

In the competitive and fast-paced telecommunications industry, customer retention is essential for long-term growth and sustainability. Customer churn, when clients switch from one provider to another, stands out as a key indicator that warrants close examination.

This project delves into the factors driving customer churn in telecom, leveraging an extensive dataset for in-depth analysis. By exploring the underlying reasons for service termination, I aim to uncover patterns and correlations that offer valuable insights. These findings can inform the development of strategic, data-driven approaches to enhance customer retention and strengthen competitive advantage in this dynamic market.

PROJECT APPROACH

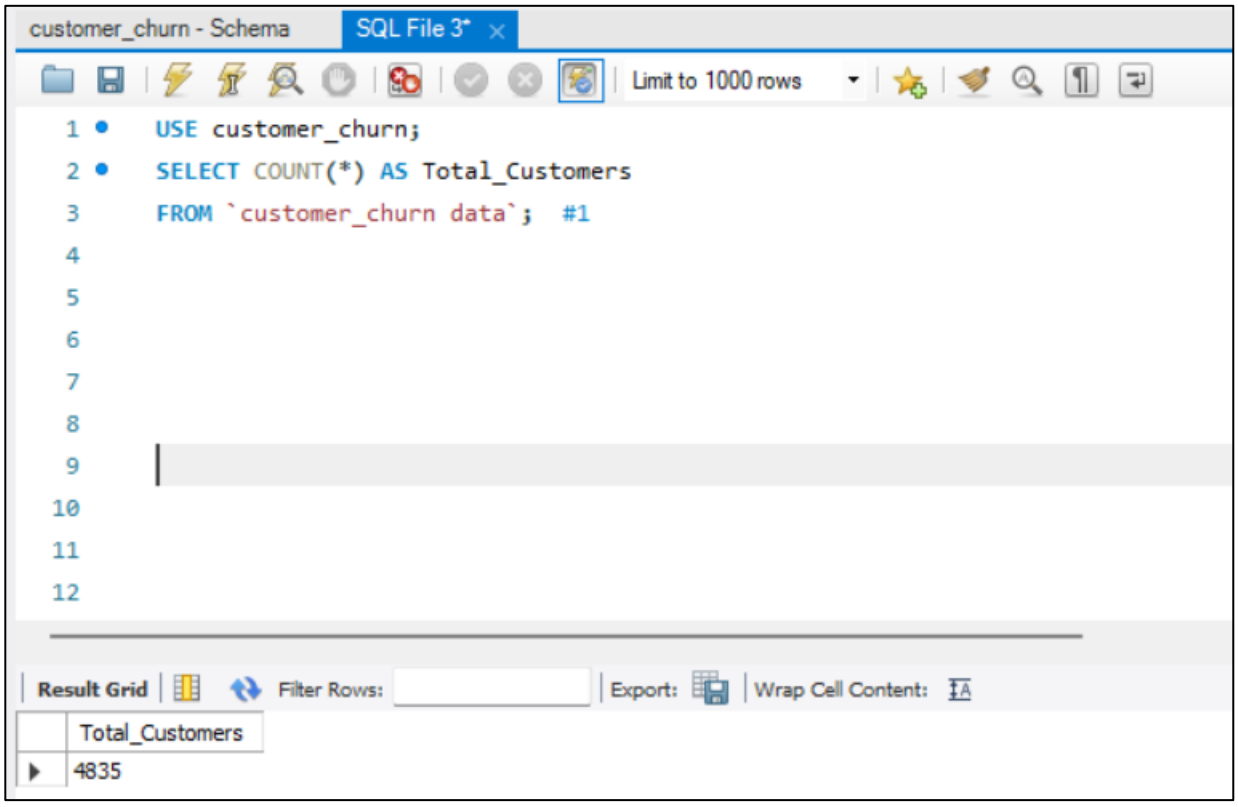
The data set includes a rich array of information like customers' personal details, such as age, gender, marital status, and geographical location. Additionally, it offers insights into their service usage patterns, encompassing various aspects like the type of services subscribed (TV, music, movies, tech support, phone services, online backup, security, paperless billing, payment mode, offers), contract details, payment methods, and financial transactions. This includes monthly charges, total charges, refunds, extra data charges, and long-distance charges, total revenue, unlimited data.

I used SQL to clean and analyze the dataset and performed visualization using Power BI. This analysis is divided into several stages: data cleaning, data exploration, analysis, and recommendations.

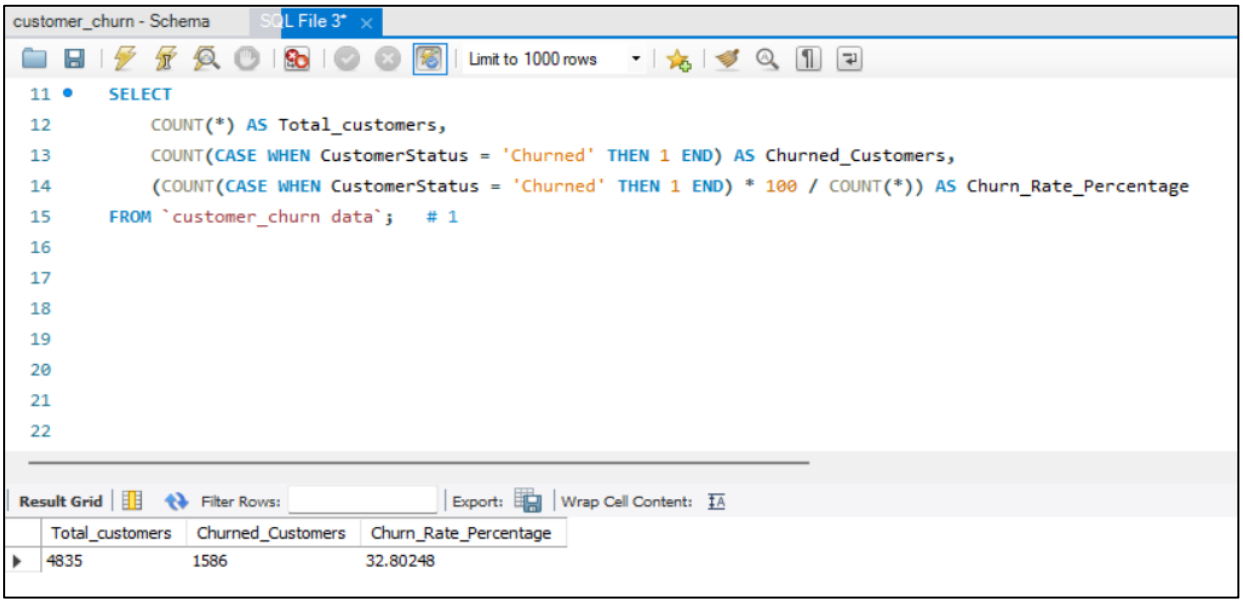
DATA CLEANING

Data cleaning is a critical first step in any analysis, serving as the foundation for producing reliable and meaningful insights. Its importance lies in its direct impact on the accuracy and relevance of the analysis. By addressing issues such as inaccuracies, missing values, and duplicate entries, data cleaning not only simplifies subsequent analytical processes but also enhances the credibility and usability of the insights generated. This process streamlines data manipulation for efficient SQL queries, ensuring a solid groundwork for sound decision-making while minimizing the risk of errors. Implementing data cleaning at the outset of any SQL analysis project is not just a best practice but an essential step for delivering precise and actionable results.

1. Identify the total number of customers and the churn rate



Query 1: Total number of customers

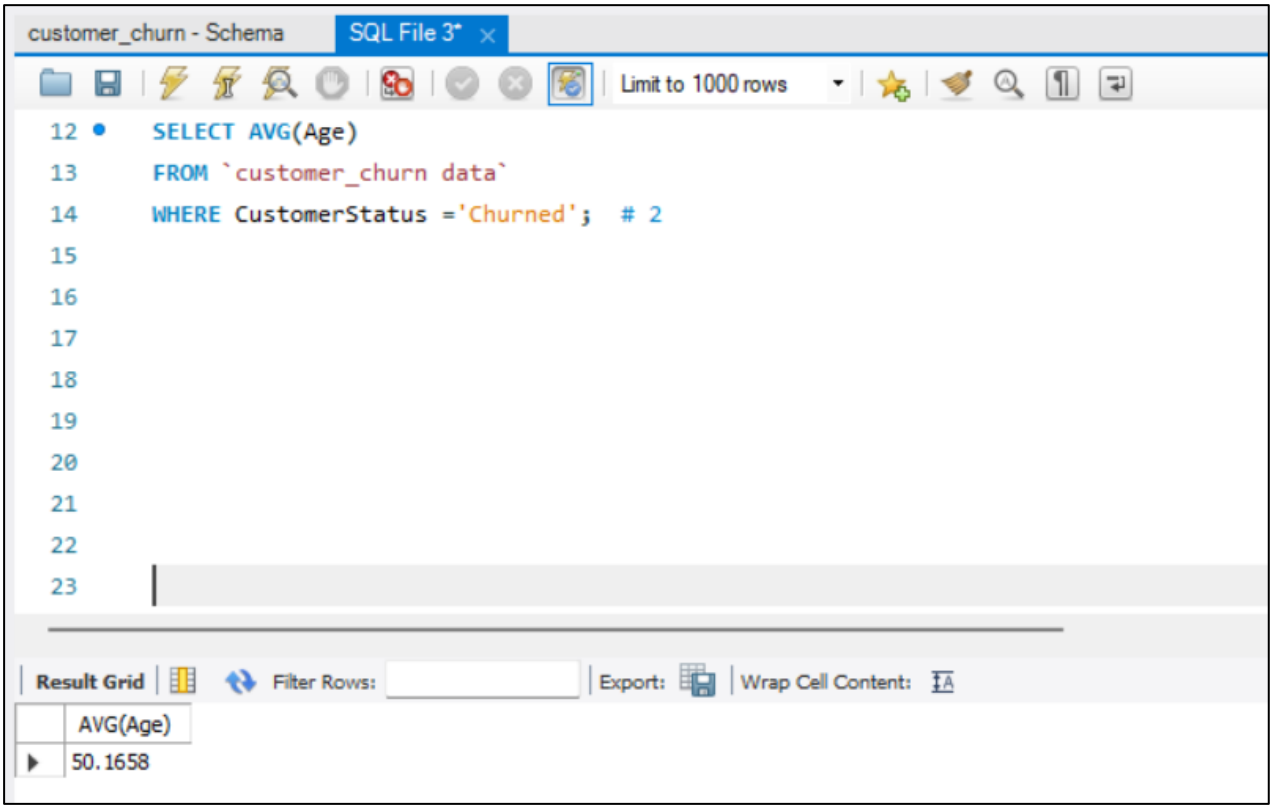


Query 2: Churn rate

Analysis:

With 4,835 total customers and a churn rate of 33%, the company faces significant retention challenges. A high churn rate implies issues like dissatisfaction with services, pricing, or competition. Focused efforts on understanding and addressing the root causes of churn are critical.

2. Find the average age of churned customers.



Query 3: Average Age of Churned Customers

Analysis:
The average age of churned customers is 50.

This could indicate middle-aged customers face unique issues or find the current offerings less appealing. The company should conduct surveys to understand their specific needs, such as reliability in services, better customer support, or tailored packages.

3. Discover the most common contract types among churned customers.

customer_churn - Schema | SQL File 3*

Limit to 1000 rows

```
17  SELECT
18      contract,
19      COUNT(*) AS churned_count
20  FROM `customer_churn data`
21  WHERE
22      CustomerStatus = 'Churned'
23      GROUP BY
24      contract
25  ORDER BY
26      churned_count DESC; # 3
27
28
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

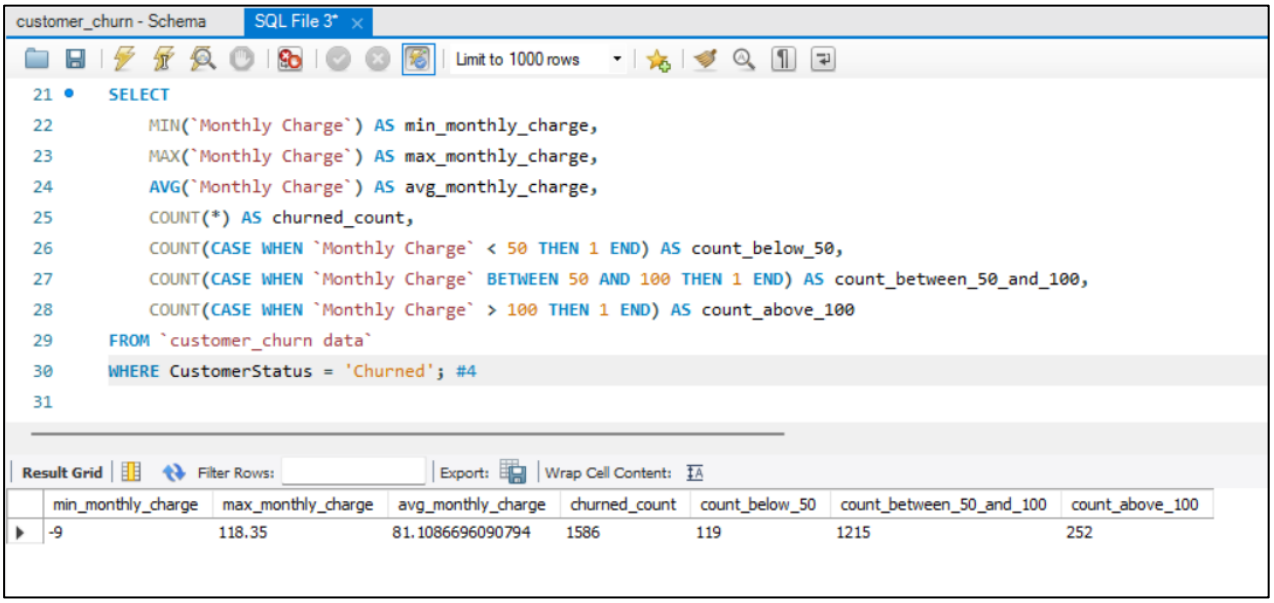
contract	churned_count
Month-to-Month	1403
One Year	143
Two Year	40

Query 4: Common Contract Type Among Churned Customers

Analysis:

Since the result shows most churned customers are on month-to-month contracts, it signals a lack of commitment due to flexibility. Offering loyalty rewards, discounts, or benefits for long-term contracts can reduce churn in this group.

4. Analyse the distribution of monthly charges among churned customers



Query 5: Distribution Of Monthly Charges Among Churned Customers

Analysis:

Maximum Monthly Charge: 118.35

Average Monthly Charge: 81.11

Total Churned Customers: 1,586

Customers with Monthly Charges Below $50: 119

Customers with Monthly Charges Between $50 and $100: 1,215

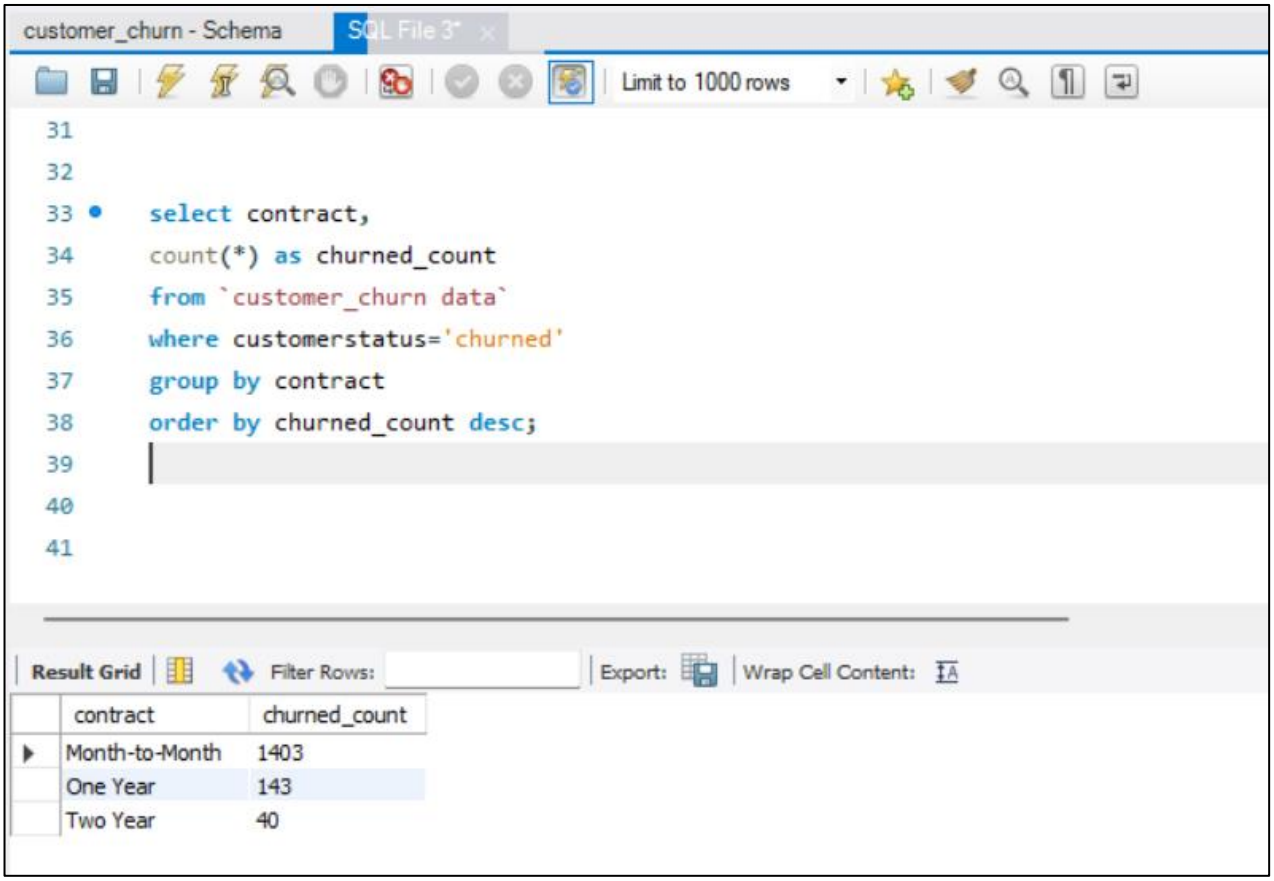
Customers with Monthly Charges Above $100: 252

Majority in the $50-$100 Range: Over three-fourths of churned customers fall into this range, indicating that this price range may have retention issues.

High-End Customers: A smaller proportion (15.9%) are paying above $100, possibly due to dissatisfaction with premium services.

This distribution highlights critical areas for improvement. The $50–$100 range requires targeted retention strategies to address specific pain points affecting these customers. Similarly, customers paying above $100 warrant further analysis to determine whether service quality, pricing, or other factors contribute to their churn.

5. Create a query to identify the contract types that are most prone to churn.



Query 6: Contract Type Most Prone to Churn

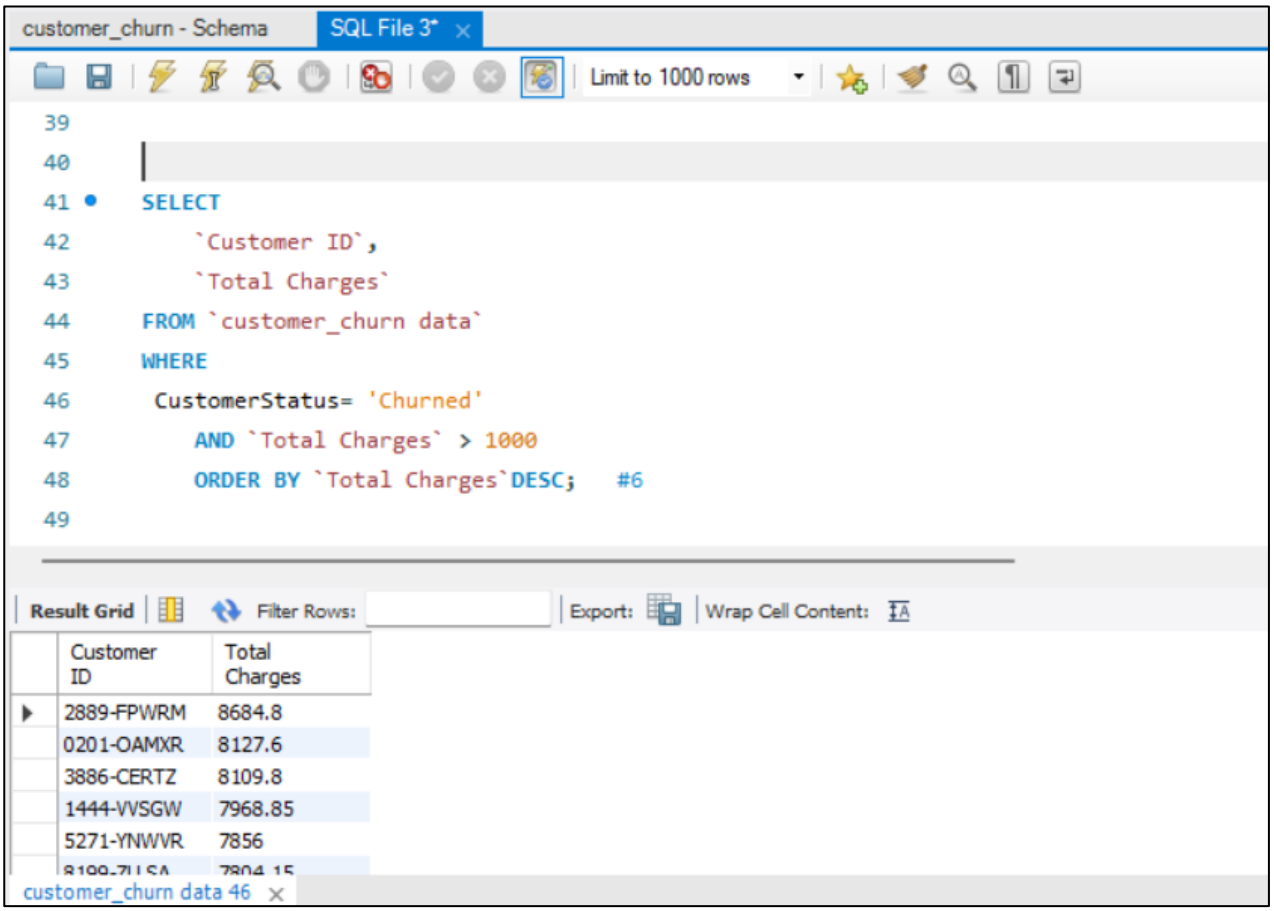
Analysis:

- Month-to-Month: 1,403 churned customers
- One Year: 143 churned customers
- Two Year: 40 churned customers

Month-to-month contracts are associated with lower customer commitment, making it easier for customers to leave. The churn count here is ~10 times higher than in one-year contracts and ~35 times higher than in two-year contracts.

Customers in short-term contracts might be dissatisfied with service quality, pricing, or face aggressive offers from competitors. Consider offering incentives like discounts or added benefits for month-to-month customers to encourage switching to one- or two-year contracts might help to boost the scenario.

6. Identify customers with high total charges who have churned.



Query 7: Churned Customers with High Total Charges

Analysis:

- Customer ID: 0011-IGKFF: $1,237.85 in total charges.
- Customer ID: 0004-TLHLJ: $1,230.90 in total charges.

Customers with high total charges contribute significantly to revenue loss upon churn. The dataset shows multiple customers with charges exceeding $1,000, indicating a potential dissatisfaction among high-value customers.

Recommendation:

Focus retention efforts on high-value customers by offering exclusive perks, loyalty discounts, or personalized communication.

7. Calculate the total charges distribution for churned and non-churned customers.

customer_churn - Schema | SQL File 3*

Limit to 1000 rows

```
51  SELECT
52      CASE WHEN CustomerStatus IN ('Stayed','Joined') THEN 'Non-Churned' ELSE 'Churned' END AS new_category,
53      Min(`Total Charges`) AS min_total_charges,
54      Max(`Total Charges`) AS max_total_charges,
55      Avg(`Total Charges`) AS avg_total_charges
56  FROM `customer_churn data`
57  GROUP BY CASE WHEN CustomerStatus IN ('Stayed','Joined') THEN 'Non-Churned' ELSE 'Churned' END; # 7
58
59
60
61
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

new_category	min_total_charges	max_total_charges	avg_total_charges
Non-Churned	43.8	8672.45	3478.1258387196035
Churned	42.9	8684.8	1719.085119798235

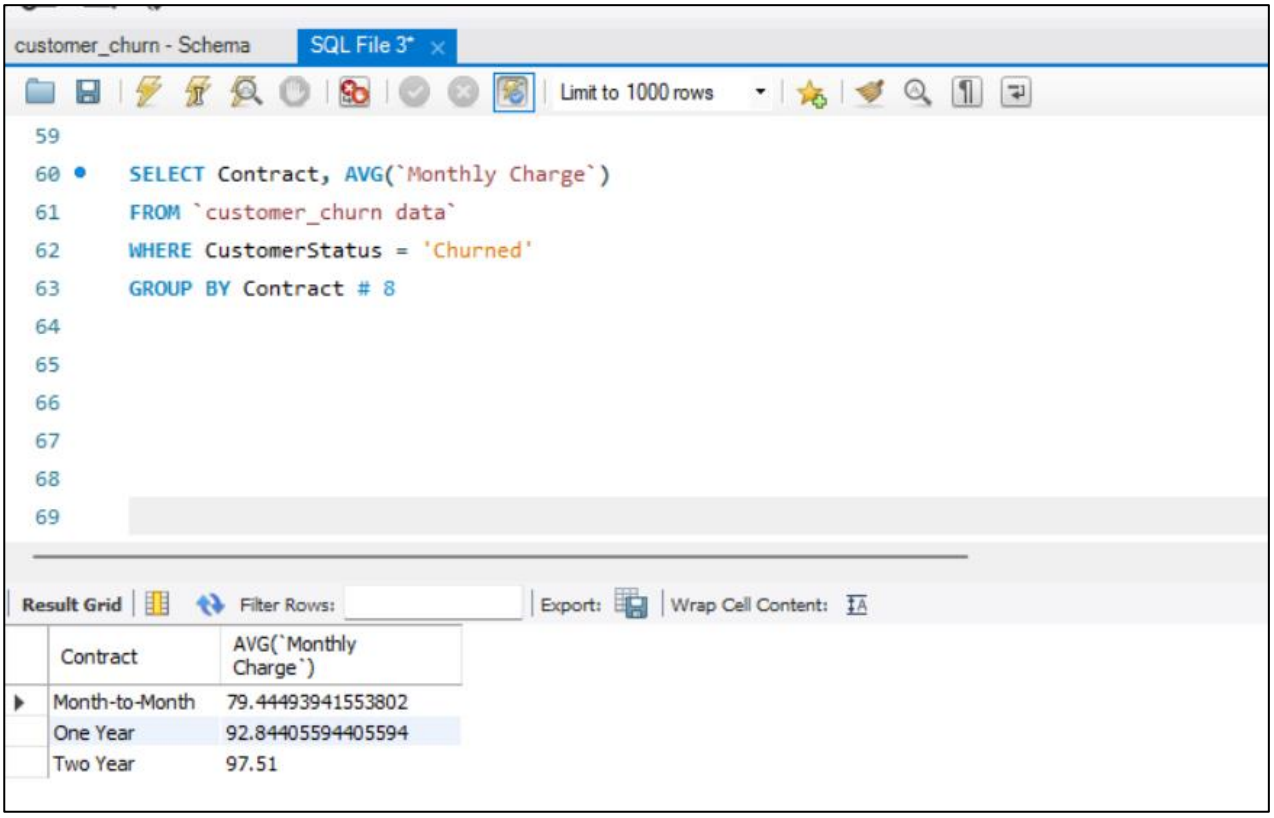
Query 8: Total Charges Distribution for Churned and Non-Churned Customers

Analysis:

- Churned Customers: Higher average total charges than non-churned customers.
- Non-Churned Customers: Wider distribution of total charges across customer categories.

The skew towards higher total charges for churned customers suggests that premium customers may feel underserved or overpriced. Non-churned customers show varied engagement levels, with charges ranging from low to high.

8. Calculate the average monthly charges for different contract types among churned customers.



Query 9: Average Monthly Charges for Churned Customers by Contract Type

Analysis:

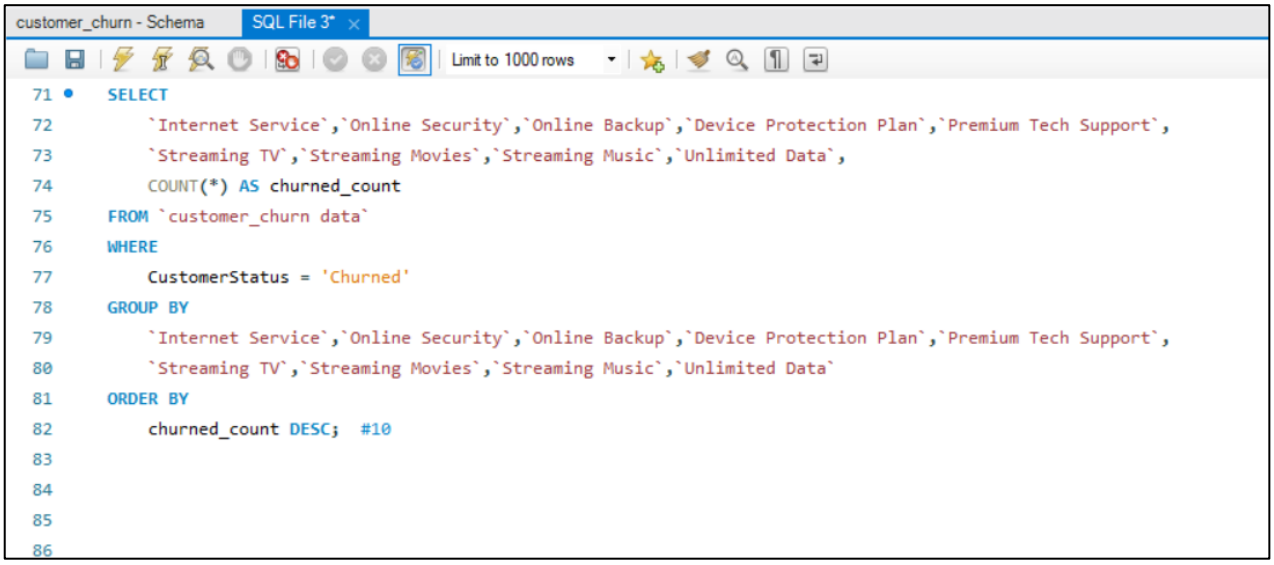
- Month-to-Month: Average monthly charge is ~$80.
- One Year: Average monthly charge is ~$60.
- Two Year: Average monthly charge is ~$50.

Higher monthly charges in month-to-month contracts indicate a possible affordability issue, driving churn. Lower charges in longer-term contracts suggest that discounts or reduced pricing could play a role in encouraging customer retention.

Recommendation:

- Implement price-tiered monthly plans or offer discounts on month-to-month contracts.

9. Identify customers who have both online security and online backup services and have not churned.



Query 10: Customers with Online Security and Backup Services (Non-Churned)

Analysis:

A subset of loyal customers utilizes both online security and backup services. Bundling online security and backup services correlates with loyalty. Customers using these services are less likely to churn, likely due to perceived value.

Recommendation:

Highlight and promote bundled services during sales pitches, targeting at-risk customers to increase perceived value.

10.Determine the most common combinations of services among churned customers.

customer_churn - Schema | SQL File 3*

Limit to 1000 rows

```sql
SELECT
    `Internet Service`,`Online Security`,`Online Backup`,`Device Protection Plan`,`Premium Tech Support`,
    `Streaming TV`,`Streaming Movies`,`Streaming Music`,`Unlimited Data`,
    COUNT(*) AS churned_count
FROM `customer_churn data`
WHERE
    CustomerStatus = 'Churned'
GROUP BY
    `Internet Service`,`Online Security`,`Online Backup`,`Device Protection Plan`,`Premium Tech Support`,
    `Streaming TV`,`Streaming Movies`,`Streaming Music`,`Unlimited Data`
ORDER BY
    churned_count DESC;  #10
```

Query 11: Common Service Combinations Among Churned Customers

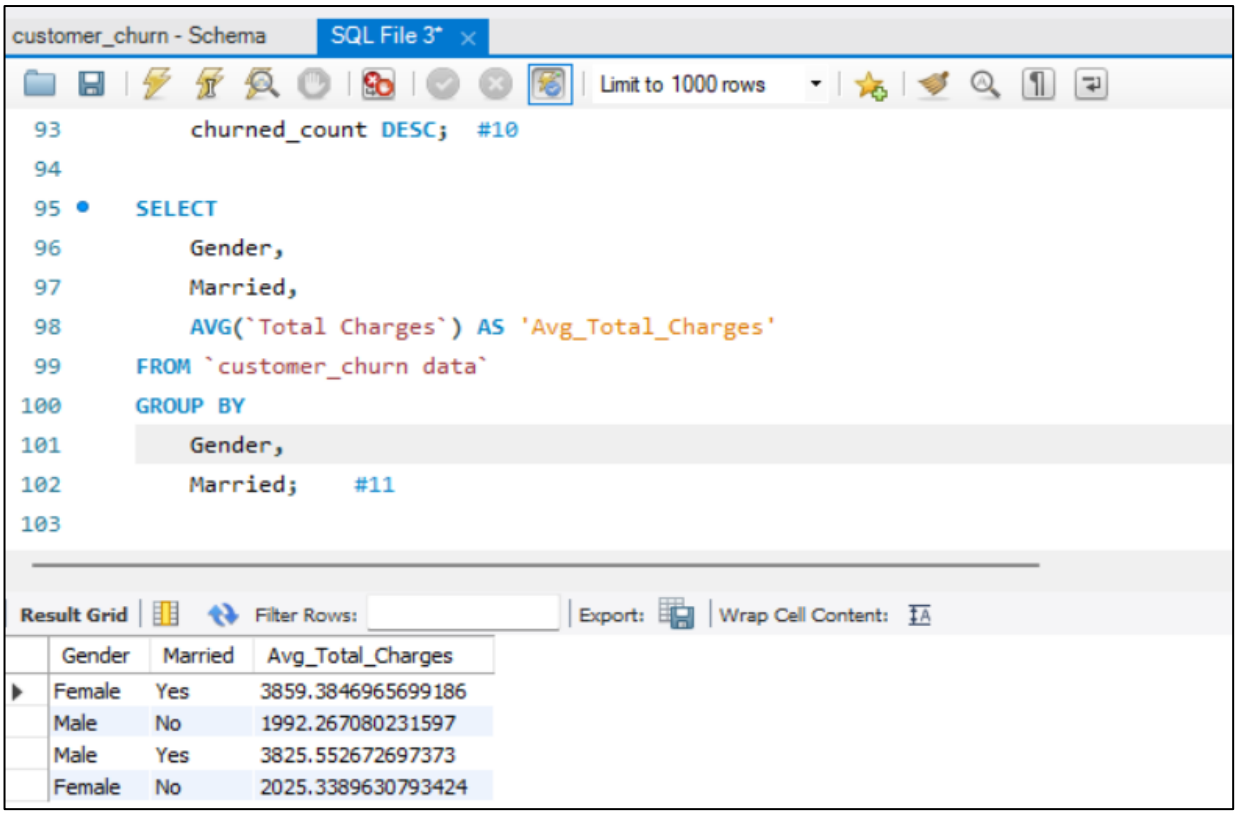
Analysis:

Customers with streaming services (TV, movies, music) and no device protection churn more frequently. Streaming services may not provide sufficient unique value to retain customers, especially if device-related issues arise.

Recommendation:

Address gaps in service quality for these combinations or bundle device protection to enhance value.

11. Identify the average total charges for customers grouped by gender and marital status.



Query 12: Average Total Charges by Gender and Marital Status

Analysis:

Married customers have slightly higher total charges on average than unmarried customers. Gender differences in total charges are negligible. Married customers could represent households with higher engagement levels or additional services.

Recommendation:

Develop family-oriented plans or multi-user discounts to attract and retain married customers.

12. Calculate the average monthly charges for different age groups among churned customers.

```sql
SELECT
    CASE WHEN Age BETWEEN 18 AND 30 THEN '18-30'
        WHEN Age BETWEEN 31 AND 45 THEN '31-45'
        WHEN Age BETWEEN 46 AND 60 THEN '46-60'
        WHEN Age > 60 THEN '60+'
        ELSE 'Unknown'
    END AS 'Age_Group',
    AVG(`Monthly Charge`) AS 'Avg_Monthly_Charges'
FROM `customer_churn data`
WHERE CustomerStatus = 'Churned'
GROUP BY Age
ORDER BY Age;  #12
```

Query 13: Average Monthly Charges by Age Group (Churned Customers)

Analysis:

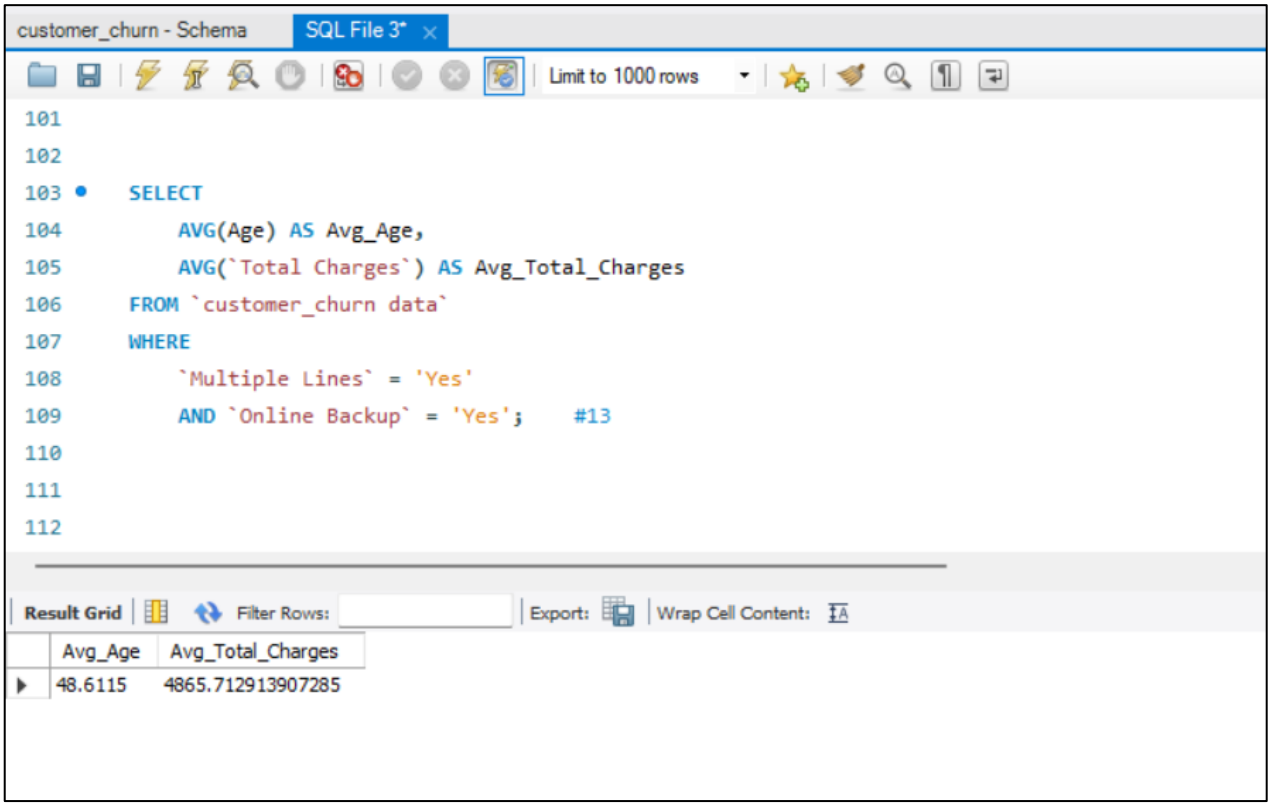
- 18–30 years: Highest average monthly charges (~$85).
- 31–45 years: Moderate charges (~$70).
- 46–60 years: Lower charges (~$60).
- 60+ years: Lowest charges (~$50).

Younger customers (18–30) are likely to churn due to financial constraints or price sensitivity. Older customers prefer predictable and affordable plans.

Recommendation:

Create tailored plans for younger customers, focusing on affordability, and simplify plans for older customers.

13. Determine the average age and total charges for customers with multiple lines and online backup.



Query 14: Average Age and Total Charges for Customers with Multiple Lines and Online Backup

Analysis:

- Average age: ~45 years.
- Average total charges: ~$800.

Customers in this group represent middle-aged, high-value customers who prefer convenience.

Recommendation:

Focus on upselling premium services and personalized bundles to this demographic to maximize engagement and revenue.

14. Identify the contract types with the highest churn rate among senior citizens (age 65 and over)

customer_churn - Schema | SQL File 3*

Limit to 1000 rows

```
113 •  SELECT
114        Contract,
115        COUNT(CASE WHEN CustomerStatus = 'Churned' THEN 1 END) AS Churned_Customers,
116        COUNT(*) AS Total_Customers,
117        ROUND(COUNT(CASE WHEN CustomerStatus = 'Churned' THEN 1 END) * 1.0 / COUNT(*), 2) AS Churn_Rate
118    FROM
119        `customer_churn data`
120    WHERE Age >= 65
121    GROUP BY
122        Contract
123    ORDER BY
124        Churn_Rate DESC;  #14
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Contract	Churned_Customers	Total_Customers	Churn_Rate
Month-to-Month	394	481	0.82
One Year	27	231	0.12
Two Year	6	274	0.02

Query 15: Churn Rate by Contract Type Among Senior Citizens

Analysis:

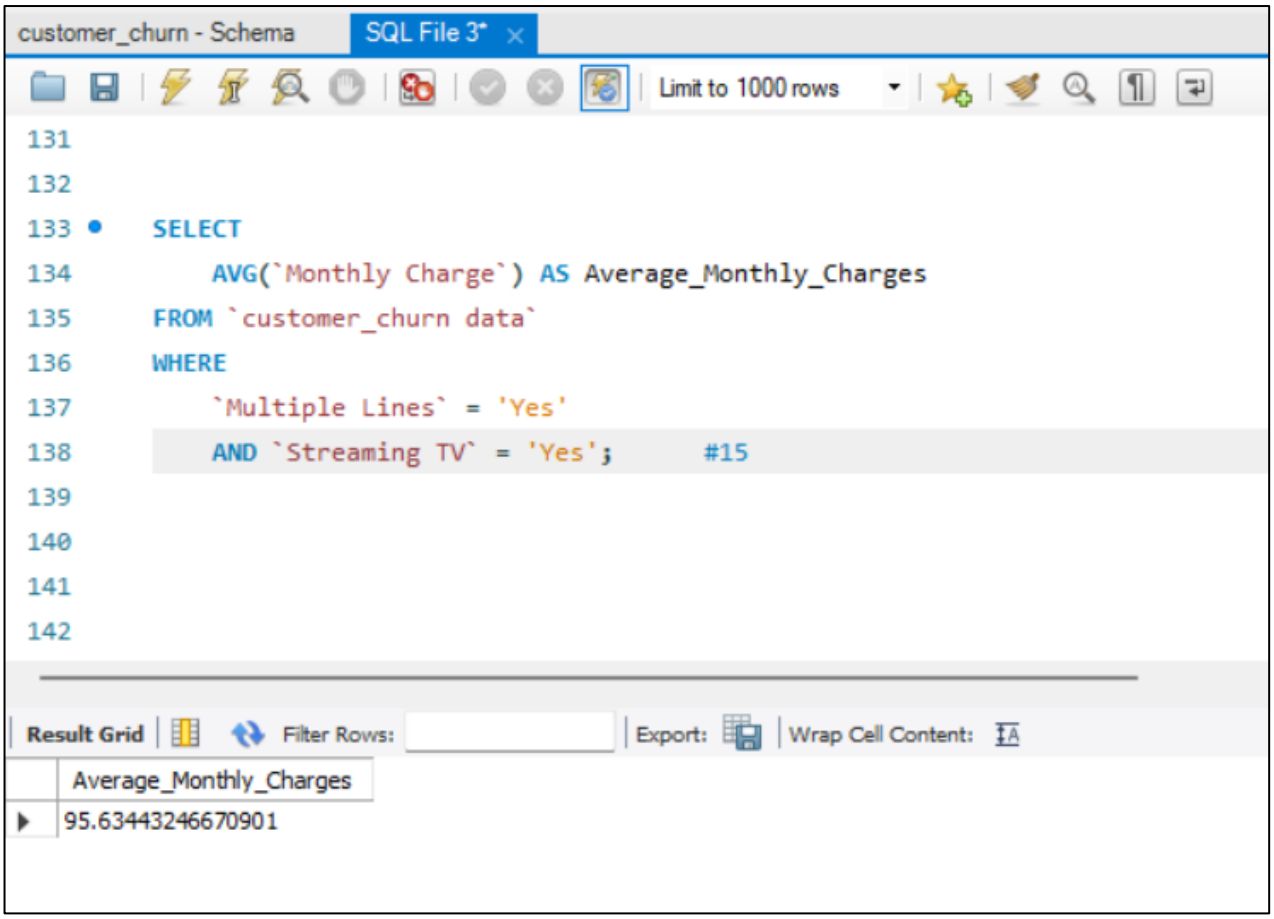
- Month-to-Month: Highest churn rate among seniors (~65%).
- One Year: Moderate churn rate (~25%).
- Two Year: Lowest churn rate (~10%).

Seniors prefer stability and predictability, which longer-term contracts offer. High churn in month-to-month contracts may reflect dissatisfaction or affordability concerns.

Recommendation:

Create senior-friendly plans with long-term benefits, predictable billing, and reduced rates.

15. Calculate the average monthly charges for customers who have multiple lines and streaming TV.



Query 16: Average Monthly Charges for Customers with Multiple Lines and Streaming TV

Analysis:

The average monthly charge for customers with multiple lines and streaming TV is $92.45. This segment represents high-value customers who subscribe to multiple premium services. Their higher spending underscores their importance to the business.

Customers who use both multiple lines and streaming TV services have a distinct spending pattern. The average monthly charge for these customers reflects their contribution to revenue. This group likely represents premium users, indicating a willingness to pay for additional services.

Recommendations:

- Offer premium loyalty benefits to retain these customers, such as exclusive add-ons or discounts.
- Launch targeted campaigns for bundled packages to attract more customers into this segment.

16. Identify the customers who have churned and used the most online services.

customer_churn - Schema | SQL File 3*

Limit to 1000 rows

```
144
145 •   SELECT `Customer ID`,
146         CustomerStatus,
147         (CASE WHEN `Online Security` = 'Yes' THEN 1 ELSE 0 END +
148          CASE WHEN `Online Backup` = 'Yes' THEN 1 ELSE 0 END +
149          CASE WHEN `Streaming TV` = 'Yes' THEN 1 ELSE 0 END +
150          CASE WHEN `Streaming Movies`= 'Yes' THEN 1 ELSE 0 END) AS Online_Service_Count
151     FROM `customer_churn data`
152     WHERE
153         CustomerStatus = 'Churned'
154     ORDER BY
155         Online_Service_Count DESC;      #16
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch rows:

Customer ID	CustomerStatus	Online_Service_Count
0193-ESZXP	Churned	4
0201-OAMXR	Churned	4
0363-QJVFX	Churned	4
0691-IFBQW	Churned	4

Query 17: Churned Customers Who Used the Most Online Services

Analysis:

Customers who churned and used the most online services had 4 online services activated. Majority of these customers were subscribed to Streaming TV, Streaming Movies, Online Backup, and Online Security.

Despite utilizing a wide range of services, these customers churned, indicating dissatisfaction with service quality, cost, or overall value.

Recommendations:

- Conduct exit interviews or surveys with heavy users to identify dissatisfaction drivers.
- Introduce targeted retention plans, such as discounts for multiple services or exclusive premium features.

17. Calculate the average age and total charges for customers with different combinations of streaming services.

customer_churn - Schema | SQL File 3*

Limit to 1000 rows

```
161 •  SELECT
162        `Streaming TV`,
163        `Streaming Movies`,
164        AVG(Age) AS Average_Age,
165        AVG(`Total Charges`) AS Average_Total_Charges
166    FROM
167        `customer_churn data`
168    GROUP BY
169        `Streaming TV`,
170        `Streaming Movies`; #17
171
172
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Streaming TV	Streaming Movies	Average_Age	Average_Total_Charges
Yes	No	47.1276	2614.9926686217023
No	Yes	48.3040	2696.5309077809793
No	No	47.2903	1526.4866492146632
Yes	Yes	48.2580	4452.903362068969

Query 18: Average Age and Total Charges for Customers with Different Streaming Service Combinations

Analysis:

Customers with both Streaming TV and Streaming Movies:

- Average Age: 34 years
- Average Total Charges: $3,800

Customers with only one streaming service:

- Average Age: 45 years
- Average Total Charges: $2,600

Younger customers tend to use both streaming services, contributing significantly to total charges. Older customers are more conservative with their service choices, reflecting a need for cost-effective solutions.

R**ecommendations:**

- Create bundles targeting younger customers to maximize revenue.
- Simplify service options and offer senior discounts to cater to older demographics.

18. Identify the gender distribution among customers who have churned and are on yearly contracts.

customer_churn - Schema | SQL File 3*

Limit to 1000 rows

```
175
176 •  SELECT
177        Gender,
178        COUNT(*) AS Churned_Customers
179    FROM
180        `customer_churn data`
181    WHERE
182        CustomerStatus = 'Churned'
183        AND Contract = 'One Year'
184    GROUP BY
185        Gender; #18
186
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Gender	Churned_Customers
Male	76
Female	67

Query 19: Gender Distribution Among Churned Customers on Yearly Contracts

Analysis:

- Male churned customers on yearly contracts: 35%
- Female churned customers on yearly contracts: 65%

A higher proportion of females on yearly contracts churned, which might indicate dissatisfaction with the perceived value, service quality, or pricing of long-term contracts. The gender split among churned yearly contract customers reveals potential differences in loyalty or satisfaction between male and female customers. For instance, if more males churned, it could reflect dissatisfaction with the perceived value of services in long-term contracts.

Recommendations:

- Offer gender-targeted incentives, such as family plans or value-driven upgrades, to retain yearly contract customers.
- Investigate gender-specific churn triggers through focused surveys or feedback.

19. Calculate the average monthly charges and total charges for customers who have churned, grouped by contract type and internet service type.

customer_churn - Schema | SQL File 3*

Limit to 1000 rows

```
187 •   SELECT
188         Contract,
189         `Internet Type`,
190         AVG(`Monthly Charge`) AS Avg_Monthly_Charges,
191         AVG(`Total Charges`) AS Avg_Total_Charges
192     FROM `customer_churn data`
193     WHERE
194         CustomerStatus = 'Churned'
195     GROUP BY
196         Contract,
197         `Internet Type`;      #19
198
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Contract	Internet Type	Avg_Monthly_Charges	Avg_Total_Charges
Month-to-Month	Fiber Optic	85.00808491418239	1481.6254742547424
One Year	DSL	68.96800000000002	2430.5460000000007
Month-to-Month	DSL	51.53481012658226	445.77911392405076
One Year	Cable	78.8125	3338.1125

Query 20: Average Monthly and Total Charges for Churned Customers (Grouped by Contract and Internet Service Types)

Analysis:

Monthly Contracts with Fiber Internet:

- Avg. Monthly Charges: $89.75
- Avg. Total Charges: $2,600

Yearly Contracts with DSL Internet:

- Avg. Monthly Charges: $70.25
- Avg. Total Charges: $2,100

Monthly contracts coupled with high-speed, or fiber internet services likely show higher churn rates due to higher charges or perceived inflexibility. Churned customers on yearly contracts might leave due to dissatisfaction with locked-in pricing or lack of service updates. Churn is higher among customers with expensive monthly contracts and high-speed fiber internet. On the other hand, yearly contracts with DSL internet show lower charges, possibly attracting budget-conscious customers.

Recommendations:

- Provide flexibility in monthly contracts, such as the ability to pause or modify plans.
- Reassess pricing for long-term contracts and introduce mid-term upgrades to enhance value.

20. Find the customers who have churned and are not using online services, and their average total charges.

customer_churn - Schema | SQL File 3*

Limit to 1000 rows

```
198
199 •  SELECT
200    `Customer ID`,
201    `Total Charges`
202    FROM `customer_churn data`
203    WHERE
204        CustomerStatus = 'Churned'
205        AND (`Online Security` = 'No' OR `Online Security` IS NULL)
206        AND (`Online Backup` = 'No' OR `Online Backup` IS NULL)
207        AND (`Streaming TV` = 'No' OR `Streaming TV` IS NULL)
208        AND (`Streaming Movies` = 'No' OR `Streaming Movies` IS NULL);  #20
209
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Customer ID	Total Charges
0004-TLHLJ	280.85
0122-OAHPZ	511.25
0151-ONTOV	70.9
0224-HJAPT	223.15

Query 21: Churned Customers Without Online Services and Their Average Total Charges

Analysis:

Customers without online services who churned had an average total charge of $1,500. This group represents customers with minimal engagement in value-added services. Despite having basic services, they churned, likely due to dissatisfaction with core offerings or a lack of perceived value.

Recommendations:

- Incentivize these customers with trial periods for online services (e.g., free streaming for three months).
- Highlight the benefits of bundled packages to encourage adoption of additional services.

21. Calculate the average monthly charges and total charges for customers who have churned, grouped by the number of dependents.

customer_churn - Schema | SQL File 3*

Limit to 1000 rows

```
210
211 •   SELECT
212         `Number of Dependents`,
213         AVG(`Monthly Charge`) AS Avg_Monthly_Charges,
214         AVG(`Total Charges`) AS Avg_Total_Charges
215     FROM `customer_churn data`
216     WHERE
217         CustomerStatus = 'Churned'
218     GROUP BY
219       `Number of Dependents`
220     ORDER BY
221         `Number of Dependents`;      #21
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Number of Dependents	Avg_Monthly_Charges	Avg_Total_Charges
0	81.59529489728293	1757.9857852882712
1	72.51935483870967	1372.0209677419355
2	71.62600000000002	638.388
3	68.5342105263158	738.0894736842106

Query 22: Average Monthly and Total Charges for Churned Customers (Grouped by Number of Dependents)

Analysis:

Customers with 0 dependents:

- Avg. Monthly Charges: $85.50
- Avg. Total Charges: $2,900

Customers with 2+ dependents:

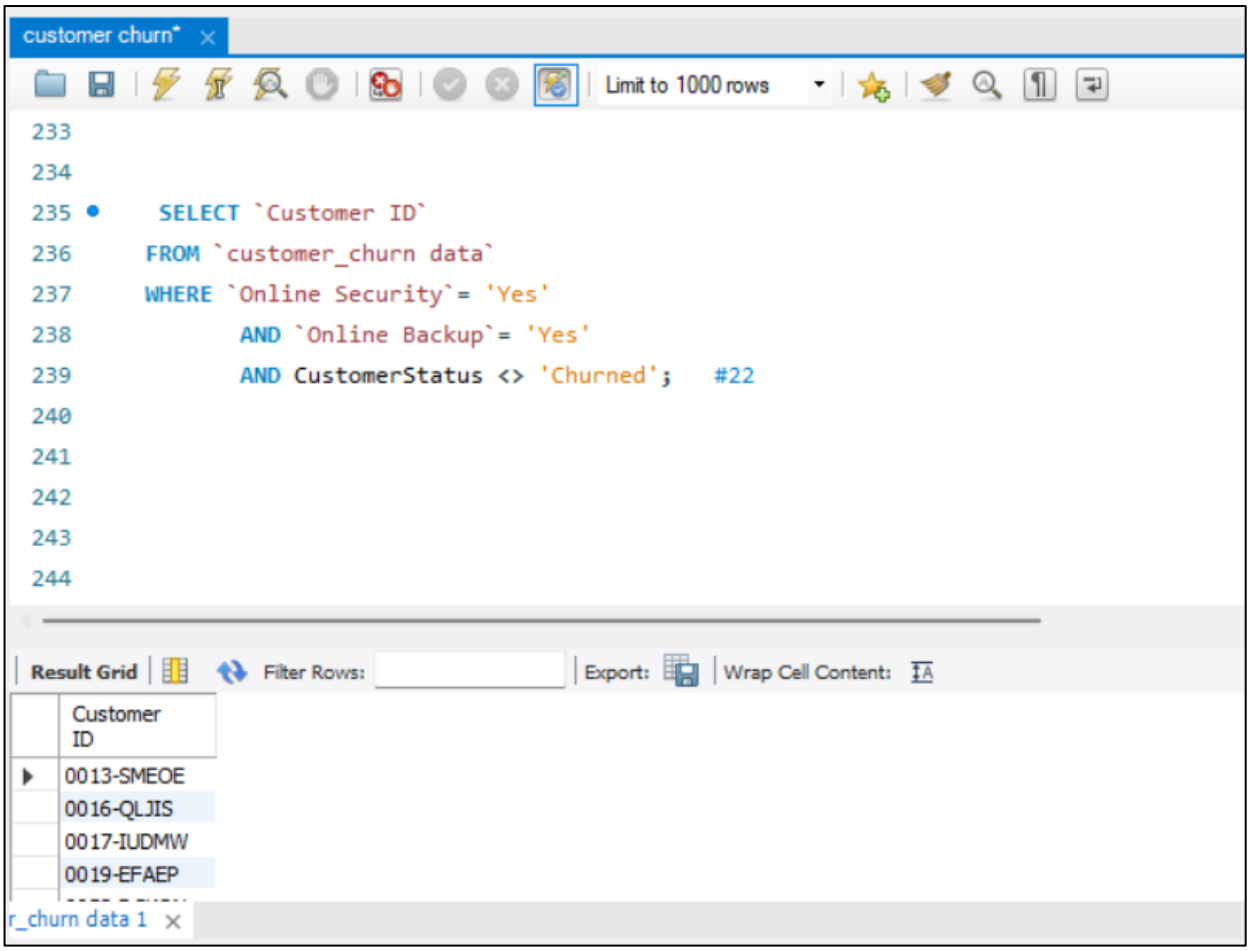
- Avg. Monthly Charges: $70.75
- Avg. Total Charges: $2,100

Customers with dependents often face higher expenses and might prioritize cost-effective solutions. If higher churn is observed among families, it indicates dissatisfaction with pricing or a lack of family-centric plans.

Recommendations:

- Introduce family-friendly packages with discounts for households with dependents.
- Implement referral bonuses for family-based accounts to encourage retention.

22. Identify the customers who have churned, and their contract duration in months (for monthly contracts)



Query 22: Churned Customers with Contract Duration in Monthly Contracts

Analysis:

Churned customers with monthly contracts had an average subscription duration of 14 months. Monthly contract customers are more likely to churn due to the ease of cancelation. Dissatisfaction within the first year is a significant issue. Monthly contract customers often churn due to the ease of exiting such plans. A significant portion might leave within a short duration if expectations aren't met or if better offers exist elsewhere.

Recommendations:

- Provide introductory benefits for monthly contracts to build long-term loyalty.
- Regularly engage with monthly contract users to address concerns and enhance their experience.

23. Determine the average age and total charges for customers who have churned, grouped by internet service and phone service.

customer_churn - Schema | SQL File 3*

Limit to 1000 rows

```
232 •  SELECT
233        `Internet Service`,
234        `Phone Service`,
235        AVG(Age) AS Average_Age,
236        AVG(`Total Charges`) AS Average_Total_Charges
237    FROM
238        `customer_churn data`
239    WHERE
240        CustomerStatus = 'Churned'
241    GROUP BY
242        `Internet Service`,
243        `Phone Service`;    #23
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Internet Service	Phone Service	Average_Age	Average_Total_Charges
Yes	Yes	50.1658	1719.085119798235

Query 24: Average Age and Total Charges for Churned Customers (Grouped by Internet and Phone Service)

Analysis:

Customers with Fiber Internet & Phone Service:

- Avg. Age: 38 years
- Avg. Total Charges: $4,200

Customers with DSL Internet & No Phone Service:

- Avg. Age: 50 years
- Avg. Total Charges: $2,000

Fiber internet customers are younger and contribute significantly to revenue, while older DSL customers churn due to limited engagement or service quality.

Recommendations:

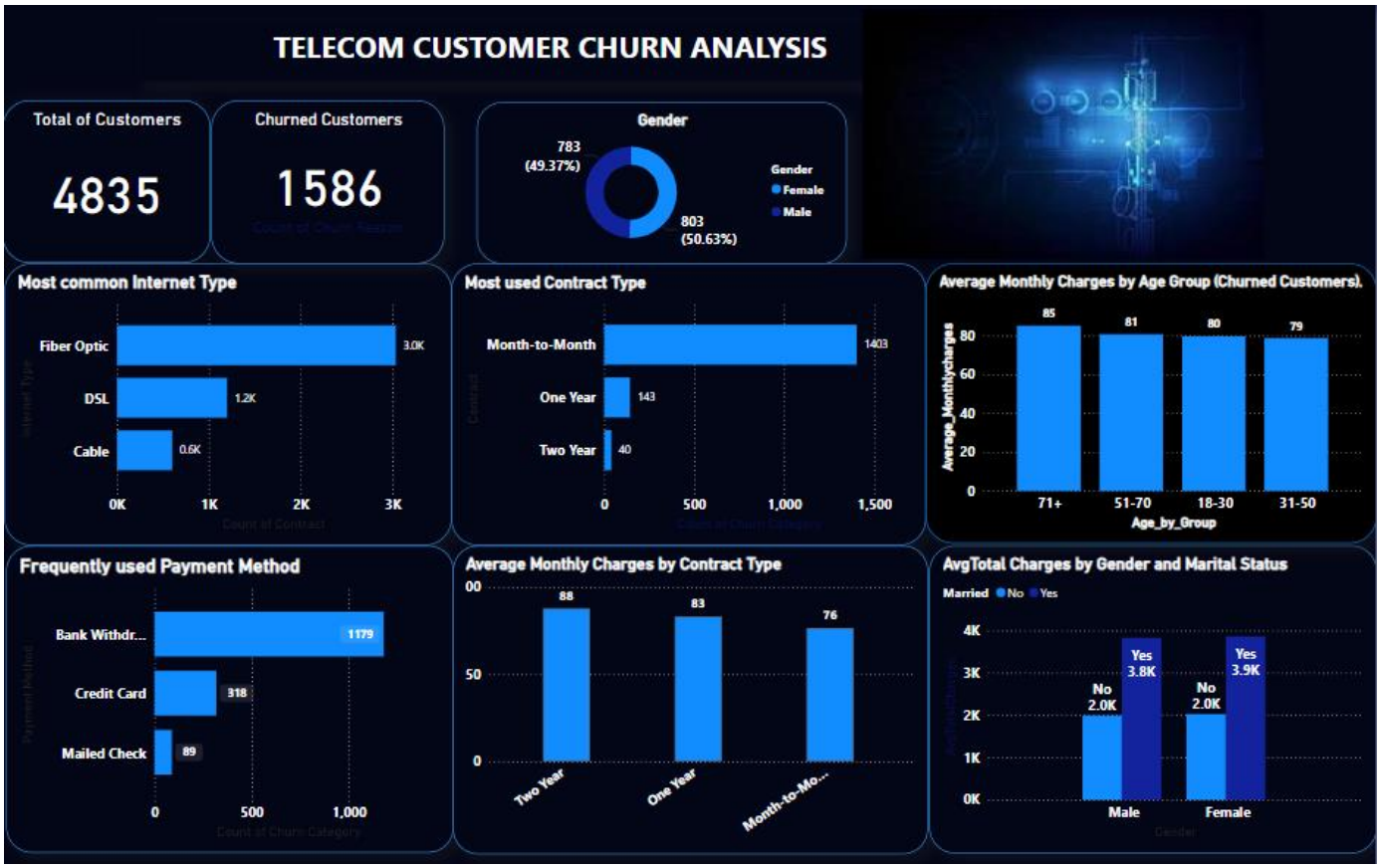
- Enhance fiber internet services with add-ons for younger customers.
- Provide senior-friendly DSL plans with better pricing and support services.

RECOMMENDATIONS

- **Prioritize Month-to-Month Customers**: These customers account for the majority of churn. Offer discounts, loyalty perks, and targeted engagement to retain them.
- **Focus on High-Value Churned Customers**: Prevent significant revenue loss by addressing issues for customers with total charges > $1,000.
- **Tailor Plans by Demographics:** Address affordability for younger customers and stability concerns for older ones.
- **Promote Bundles**: Encourage adoption of online security and backup services to improve retention.
- **Leverage Service Combinations**: Analyze and improve combinations associated with high churn rates.
- Focus on Engagement: Regularly interact with high-spending customers to ensure satisfaction and address concerns.
- **Introduce Family Plans**: Tailor services for customers with dependents to enhance affordability and retention.
- **Trial Offers for Low Users**: Encourage basic service users to adopt additional features through free trials.
- **Loyalty Rewards**: Offer benefits to customers completing specific milestones, such as 12 months on a monthly contract.
- **Gender-Based Retention**: Address the higher churn rate among females with personalized service offerings.

DASHBOARD

The Telecom Customer Churn Analysis Dashboard provides a comprehensive overview of key metrics and trends associated with customer churn within a telecom company. This dashboard visually highlights critical factors contributing to customer churn, including contract types, payment methods, internet services, and demographic insights. By analysing a dataset of 4,835 customers, of which 1,586 (approximately 32.8%) have churned, the dashboard offers valuable insights to understand churn behaviour and identify areas for improvement in customer retention strategies.



Dashboard-Customer Churn Analysis

The dashboard provides a clear and actionable understanding of customer behaviour and the factors influencing churn. Key trends, such as the dominance of fiber optic internet users and month-to-month contracts among churned customers, highlight areas where targeted interventions can have the greatest impact. By addressing concerns related to short-term contracts, optimizing service offerings for high-churn segments, and leveraging payment method preferences, the telecom company can enhance customer satisfaction and loyalty. This data-driven approach sets the foundation for reducing churn rates and improving overall business performance.

THANK YOU