

Insights by SQL

1. Customer Churn Rate by Category

Insight: This query helps identify churn rates by different categories, enabling targeted customer retention strategies.

```
SELECT [Category_Name], COUNT(*) AS Churn_Count
FROM [dbo].[Customer_Churn_Category] AS CC
JOIN [dbo].[Churn_Category] C ON C.[Churn_Category_ID] = CC.[ChurnCategoryID]
GROUP BY [Category_Name]
```

.24 %

Results Messages

	Category_Name	Churn_Count
1	Attitude	314
2	Competitor	841
3	Dissatisfaction	303
4	Other	200
5	Price	211

Query executed successfully. | OMAR (16.0 RTM) | OMAR\MATRIXx (65) | Telecom | 00:00:00 | 5 rows

2. Average Revenue per User (ARPU)

Insight: Calculates the average revenue per user, which is a critical metric for assessing the overall profitability of the telecom services.

The screenshot shows a SQL query window with the following query:

```
SELECT AVG([Total_Revenue]) AS AVG_Revenue FROM [dbo].[Customer]
```

The query results are displayed in a table with one row and one column:

AVG_Revenue
3038.16372930692

The status bar at the bottom indicates: Query executed successfully. OMAR (16.0 RTM) OMAR\MATRIXx (65) Telecom 00:00:00 1 rows

3. Customer Distribution by Location

Insight: Understanding the geographical distribution of customers can help in regional marketing and service allocation.

The screenshot shows a SQL query window with the following query:

```
SELECT L.[City], COUNT(*) AS Customer_Count
FROM [dbo].[Location] L
JOIN [dbo].[Customer] C ON C.[LocationID] = L.LocationID
GROUP BY L.City
ORDER BY Customer_Count ASC;
```

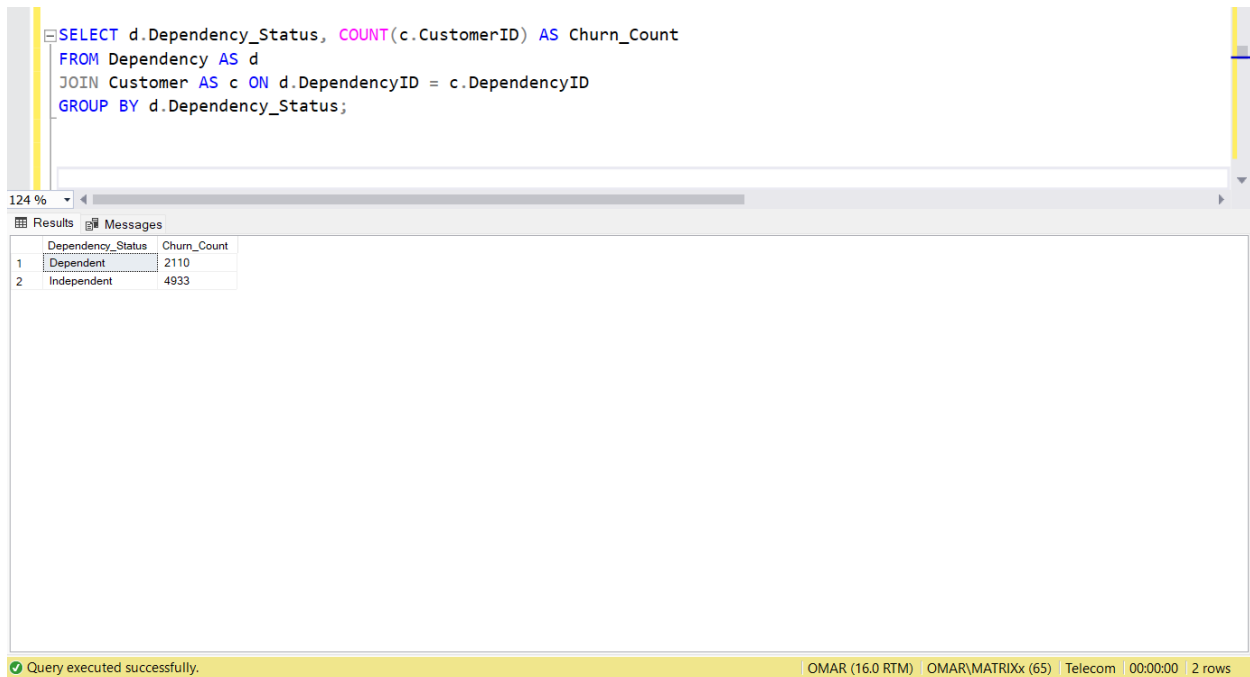
The query results are displayed in a table with two columns: City and Customer_Count. The results are ordered by Customer_Count in ascending order.

City	Customer_Count
Johannesburg	2
Eldridge	2
Jacumba	2
South Lake Tahoe	2
Holtville	2
Pauma Valley	3
Santee	3
Pismo Beach	3
Del Mar	3
Big Bear City	3
Borrego Springs	3
Fort Bidwell	3
Mojave	3
Tahoma	3
Ravendale	3
Boulevard	3
Oceano	3
Homewood	3
Highland	3
Topaz	3
Indian Wells	3
Ludlow	3

The status bar at the bottom indicates: Query executed successfully. OMAR (16.0 RTM) OMAR\MATRIXx (65) Telecom 00:00:00 1,108 rows

4. Dependency Status and Churn Rate

insight: Analyzes whether dependents (like family plans) have a lower churn rate compared to independent accounts.



The screenshot shows a SQL query execution window. The query is as follows:

```
SELECT d.Dependency_Status, COUNT(c.CustomerID) AS Churn_Count
FROM Dependency AS d
JOIN Customer AS c ON d.DependencyID = c.DependencyID
GROUP BY d.Dependency_Status;
```

The results are displayed in a table with two columns: **Dependency_Status** and **Churn_Count**. The table contains two rows:

	Dependency_Status	Churn_Count
1	Dependent	2110
2	Independent	4933

The status bar at the bottom indicates: "Query executed successfully." and "OMAR (16.0 RTM) OMAR\MATRIXx (65) Telecom 00:00:00 2 rows".

5- Service Plan Popularity

Insight: Identifies the most popular service features, aiding in the development of new features or improvement of existing ones.

```

SELECT sp.Service_Feature, COUNT(cf.CustomerID) AS Usage_Count
FROM Service_Plan AS sp
JOIN Customer_Feature AS cf ON sp.Service_Plan_ID = cf.Service_Plan_ID
GROUP BY sp.Service_Feature;

```

	Service_Feature	Usage_Count
1	Device Protection	2422
2	Online Backup	2429
3	Online Security	2019
4	Streaming Movies	2732
5	Streaming Music	2488
6	Streaming TV	2707
7	Tech Support	2044
8	Unlimited Data	4745

Query executed successfully. OMAR (16.0 RTM) OMAR\MATRIXx (65) Telecom 00:00:00 8 rows

6. Customer Satisfaction and Churn

Insight: This query assesses the correlation between customer satisfaction scores and churn rates, potentially highlighting thresholds for intervention.

```

SELECT c.Satisfaction_Score, COUNT([CustomerID]) AS Churned_Customers
FROM [dbo].[Customer] c
JOIN [dbo].[Customer_Status] cs ON cs.[Customer_Status_ID] = c.[Customer_Status_ID]
WHERE cs.[Customer_Status] = 'Churned'
GROUP BY c.[Satisfaction_Score]

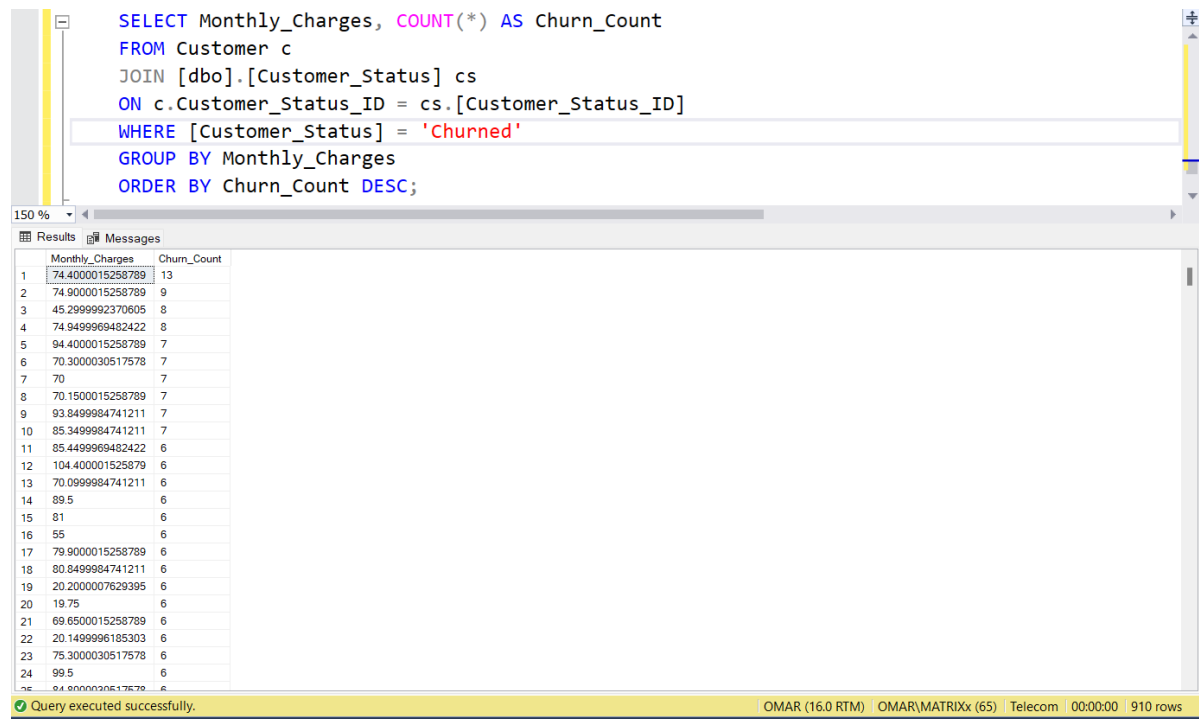
```

	Satisfaction_Score	Churned_Customers
1	1	518
2	2	429
3	3	

Query executed successfully. OMAR (16.0 RTM) OMAR\MATRIXx (65) Telecom 00:00:00 3 rows

7. Monthly Charges vs. Churn

Insight: Helps to understand if higher monthly charges lead to higher churn rates, which could inform pricing strategies.



The screenshot shows a SQL query window with the following text:

```
SELECT Monthly_Charges, COUNT(*) AS Churn_Count
FROM Customer c
JOIN [dbo].[Customer_Status] cs
ON c.Customer_Status_ID = cs.[Customer_Status_ID]
WHERE [Customer_Status] = 'Churned'
GROUP BY Monthly_Charges
ORDER BY Churn_Count DESC;
```

Below the query window, the 'Results' tab is active, displaying a table with two columns: 'Monthly_Charges' and 'Churn_Count'. The table contains 24 rows of data, sorted by 'Churn_Count' in descending order. The first row has a 'Monthly_Charges' value of 74.4000015258789 and a 'Churn_Count' of 13. The last row has a 'Monthly_Charges' value of 84.8000030517578 and a 'Churn_Count' of 6.

Monthly_Charges	Churn_Count
74.4000015258789	13
74.9000015258789	9
45.2999992370605	8
74.9499996482422	8
94.4000015258789	7
70.3000030517578	7
70	7
70.1500015258789	7
93.8499984741211	7
85.3499984741211	7
85.4499969482422	6
104.4000015258789	6
70.0999984741211	6
89.5	6
81	6
55	6
79.9000015258789	6
80.8499984741211	6
20.2000007629395	6
19.75	6
69.6500015258789	6
20.1499996185303	6
75.3000030517578	6
99.5	6
84.8000030517578	6

At the bottom of the window, a status bar indicates: 'Query executed successfully. OMAR (16.0 RTM) OMAR\MATRIXx (65) Telecom 00:00:00 910 rows'.

8. Long-Distance Charges Analysis

Insight: Determines if marital status influences long-distance calling charges, potentially indicating usage patterns among different demographic groups.

The screenshot shows a SQL query execution window. The query is as follows:

```
SELECT AVG(Avg_Monthly_Long_Distance_Charges) AS Avg_Long_Distance_Charges, Marital_Status
FROM Customer AS c
JOIN Marital_Status AS m ON c.Marital_Status_ID = m.Marital_Status_ID
GROUP BY m.Marital_Status;
```

The results pane shows two rows of data:

	Avg_Long_Distance_Charges	Marital_Status
1	23.1221898829566	Married
2	22.806432304491	Single

The status bar at the bottom indicates: "Query executed successfully. OMAR (16.0 RTM) OMAR\MATRIXx (65) Telecom 00:00:00 2 rows".

9.

Insights:

Churn Reason Analysis: This query provides a detailed breakdown of the reasons customers have left the service, which can help identify key areas of improvement.

Customer Impact: By understanding which reasons affect the most customers, targeted strategies can be developed to address these issues and potentially reduce future churn.

Prioritization of Solutions: With clear data on the most common churn reasons, resources can be allocated more effectively to tackle the largest problems first.

```

SELECT
    cr.Reason_Description,
    COUNT(*) AS Customer_Count
FROM
    Customer_Churn_Category AS ccc
JOIN
    Churn_Category AS cc ON ccc.ChurnCategoryID = cc.Churn_Category_ID
JOIN
    Churn_Category_Reason AS ccr ON cc.Churn_Category_ID = ccr.ChurnCategoryID
JOIN
    Churn_Reason AS cr ON ccr.ChurnReasonID = cr.Churn_Reason_ID
GROUP BY
    cr.Reason_Description
ORDER BY
    Customer_Count DESC;

```

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Results Messages

	Reason_Description	Customer_Count
1	Competitor offered higher download speeds	284562
2	Competitor offered more data	261716
3	Competitor made better offer	230352
4	Competitor had better devices	213620
5	Attitude of support person	172430
6	Attitude of service provider	126094
7	Network reliability	90276
8	Product dissatisfaction	81358
9	Don't know	80962
10	Service dissatisfaction	80628
11	Lack of self-service on Website	70460
12	Price too high	63992
13	Extra data charges	44192
14	Limited range of services	32914

Query executed successfully. | OMAR (16.0 RTM) | OMAR\MATRIXx (65) | Telecom | 00:00:00 | 20 rows