**CHURN ANALYSIS – POSTGRESQL QUERIES**

**DATA EXPLORATION**

**CHECK DISTINCT VALUES**

**Total and Percentage of customers by gender:**

SELECT Gender, COUNT(Gender) AS TotalCount,

ROUND((COUNT(Gender) \* 1.0 / (SELECT COUNT(\*) from stg\_Churn))\*100,1) AS Percentage

FROM stg\_Churn

GROUP BY Gender;

**Total and Percentage of customers by contracts:**

SELECT Contract, COUNT(Contract) AS TotalCount,

ROUND((COUNT(Contract) \* 1.0 / (SELECT COUNT(\*) from stg\_Churn))\*100,1) AS Percentage

FROM stg\_Churn

GROUP BY Contract;

**Insights of Customer Status, Revenue and Revenue Percentage:**

SELECT Customer\_Status, COUNT(Customer\_Status) AS TotalCount,

ROUND(SUM(Total\_Revenue)/1000,1) || ' K' AS TotalRev,

ROUND(SUM(Total\_Revenue) / (SELECT SUM(Total\_Revenue) FROM stg\_Churn) \* 100,1) AS RevPercentage

FROM stg\_Churn

GROUP BY Customer\_Status;

**State wise Number of customers and percentage with descending order:**

SELECT State, COUNT(State) AS TotalCount,

ROUND(COUNT(State) \* 1.0 / (SELECT COUNT(\*) FROM stg\_Churn) \* 100, 2) AS Percentage

FROM stg\_Churn

GROUP BY State

ORDER BY Percentage DESC;

**CHECKING NULL**

SELECT

SUM(CASE WHEN Customer\_ID IS NULL THEN 1 ELSE 0 END) AS Customer\_ID\_Null\_Count,

SUM(CASE WHEN Gender IS NULL THEN 1 ELSE 0 END) AS Gender\_Null\_Count,

SUM(CASE WHEN Age IS NULL THEN 1 ELSE 0 END) AS Age\_Null\_Count,

SUM(CASE WHEN Married IS NULL THEN 1 ELSE 0 END) AS Married\_Null\_Count,

SUM(CASE WHEN State IS NULL THEN 1 ELSE 0 END) AS State\_Null\_Count,

SUM(CASE WHEN Number\_of\_Referrals IS NULL THEN 1 ELSE 0 END) AS Number\_of\_Referrals\_Null\_Count,

SUM(CASE WHEN Tenure\_in\_Months IS NULL THEN 1 ELSE 0 END) AS Tenure\_in\_Months\_Null\_Count,

SUM(CASE WHEN Value\_Deal IS NULL THEN 1 ELSE 0 END) AS Value\_Deal\_Null\_Count,

SUM(CASE WHEN Phone\_Service IS NULL THEN 1 ELSE 0 END) AS Phone\_Service\_Null\_Count,

SUM(CASE WHEN Multiple\_Lines IS NULL THEN 1 ELSE 0 END) AS Multiple\_Lines\_Null\_Count,

SUM(CASE WHEN Internet\_Service IS NULL THEN 1 ELSE 0 END) AS Internet\_Service\_Null\_Count,

SUM(CASE WHEN Internet\_Type IS NULL THEN 1 ELSE 0 END) AS Internet\_Type\_Null\_Count,

SUM(CASE WHEN Online\_Security IS NULL THEN 1 ELSE 0 END) AS Online\_Security\_Null\_Count,

SUM(CASE WHEN Online\_Backup IS NULL THEN 1 ELSE 0 END) AS Online\_Backup\_Null\_Count,

SUM(CASE WHEN Device\_Protection\_Plan IS NULL THEN 1 ELSE 0 END) AS Device\_Protection\_Plan\_Null\_Count,

SUM(CASE WHEN Premium\_Support IS NULL THEN 1 ELSE 0 END) AS Premium\_Support\_Null\_Count,

SUM(CASE WHEN Streaming\_TV IS NULL THEN 1 ELSE 0 END) AS Streaming\_TV\_Null\_Count,

SUM(CASE WHEN Streaming\_Movies IS NULL THEN 1 ELSE 0 END) AS Streaming\_Movies\_Null\_Count,

SUM(CASE WHEN Streaming\_Music IS NULL THEN 1 ELSE 0 END) AS Streaming\_Music\_Null\_Count,

SUM(CASE WHEN Unlimited\_Data IS NULL THEN 1 ELSE 0 END) AS Unlimited\_Data\_Null\_Count,

SUM(CASE WHEN Contract IS NULL THEN 1 ELSE 0 END) AS Contract\_Null\_Count,

SUM(CASE WHEN Paperless\_Billing IS NULL THEN 1 ELSE 0 END) AS Paperless\_Billing\_Null\_Count,

SUM(CASE WHEN Payment\_Method IS NULL THEN 1 ELSE 0 END) AS Payment\_Method\_Null\_Count,

SUM(CASE WHEN Monthly\_Charge IS NULL THEN 1 ELSE 0 END) AS Monthly\_Charge\_Null\_Count,

SUM(CASE WHEN Total\_Charges IS NULL THEN 1 ELSE 0 END) AS Total\_Charges\_Null\_Count,

SUM(CASE WHEN Total\_Refunds IS NULL THEN 1 ELSE 0 END) AS Total\_Refunds\_Null\_Count,

SUM(CASE WHEN Total\_Extra\_Data\_Charges IS NULL THEN 1 ELSE 0 END) AS Total\_Extra\_Data\_Charges\_Null\_Count,

SUM(CASE WHEN Total\_Long\_Distance\_Charges IS NULL THEN 1 ELSE 0 END) AS Total\_Long\_Distance\_Charges\_Null\_Count,

SUM(CASE WHEN Total\_Revenue IS NULL THEN 1 ELSE 0 END) AS Total\_Revenue\_Null\_Count,

SUM(CASE WHEN Customer\_Status IS NULL THEN 1 ELSE 0 END) AS Customer\_Status\_Null\_Count,

SUM(CASE WHEN Churn\_Category IS NULL THEN 1 ELSE 0 END) AS Churn\_Category\_Null\_Count,

SUM(CASE WHEN Churn\_Reason IS NULL THEN 1 ELSE 0 END) AS Churn\_Reason\_Null\_Count

FROM stg\_Churn;

**REMOVE NULL AND REPLACE THE VALUES FO IT**

Remove null and insert the new data into Prod table

SELECT

Customer\_ID, Gender, Age, Married, State, Number\_of\_Referrals, Tenure\_in\_Months,

ISNULL(Value\_Deal, 'None') AS Value\_Deal,

Phone\_Service,

ISNULL(Multiple\_Lines, 'No') As Multiple\_Lines,

Internet\_Service,

ISNULL(Internet\_Type, 'None') AS Internet\_Type,

ISNULL(Online\_Security, 'No') AS Online\_Security,

ISNULL(Online\_Backup, 'No') AS Online\_Backup,

ISNULL(Device\_Protection\_Plan, 'No') AS Device\_Protection\_Plan,

ISNULL(Premium\_Support, 'No') AS Premium\_Support,

ISNULL(Streaming\_TV, 'No') AS Streaming\_TV,

ISNULL(Streaming\_Movies, 'No') AS Streaming\_Movies,

ISNULL(Streaming\_Music, 'No') AS Streaming\_Music,

ISNULL(Unlimited\_Data, 'No') AS Unlimited\_Data,

Contract,

Paperless\_Billing,

Payment\_Method,

Monthly\_Charge,

Total\_Charges,

Total\_Refunds,

Total\_Extra\_Data\_Charges,

Total\_Long\_Distance\_Charges,

Total\_Revenue,

Customer\_Status,

ISNULL(Churn\_Category, 'Others') AS Churn\_Category,

ISNULL(Churn\_Reason , 'Others') AS Churn\_Reason

INTO [db\_Churn].[dbo].[prod\_Churn]

FROM [db\_Churn].[dbo].[stg\_Churn];