# Churn Analysis SQL Code Snippets

## Gender distribution with percentage

SELECT Gender, Count(Gender) as TotalCount,  
Count(Gender) \* 1.0 / (Select Count(\*) from prod\_Churn) as Percentage  
from prod\_Churn  
Group by Gender;

## Contract type distribution with percentage

SELECT Contract, Count(Contract) as TotalCount,  
Count(Contract) \* 1.0 / (Select Count(\*) from prod\_Churn) as Percentage  
from prod\_Churn  
Group by Contract;

## Revenue and customer count by status

SELECT Customer\_Status, Count(Customer\_Status) as TotalCount, Sum(Total\_Revenue) as TotalRev,  
Sum(Total\_Revenue) / (Select sum(Total\_Revenue) from prod\_Churn) \* 100 as RevPercentage  
from prod\_Churn  
Group by Customer\_Status;

## Top states by customer percentage

SELECT State, Count(State) as TotalCount,  
Count(State) \* 1.0 / (Select Count(\*) from prod\_Churn) as Percentage  
from prod\_Churn  
Group by State  
Order by Percentage desc;

## Null value count for key columns

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 prod\_Churn;

## Clean and insert data into prod\_Churn

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 prod\_Churn  
FROM stg\_Churn;

## Create view for churned and stayed customers

CREATE VIEW vw\_ChurnData AS  
SELECT \* FROM prod\_Churn WHERE Customer\_Status IN ('Churned', 'Stayed');

## Create view for new joiners

CREATE VIEW vw\_JoinData AS  
SELECT \* FROM prod\_Churn WHERE Customer\_Status = 'Joined';