

Data Exploration – Check Distinct Values

```
Select*from Customer_data
SELECT Gender, Count(Gender) as TotalCount,
Count(Gender)*100.0 / (Select Count(*) from Customer_Data) as Percentage
from Customer_Data
Group by Gender;
```

```
SELECT Contract, Count(Contract) as TotalCount,
Count(Contract) *1.0 / (Select Count(*) from Customer_Data) as Percentage
from Customer_Data
Group by Contract;
```

```
SELECT Customer_Status, Count(Customer_Status) as TotalCount,
Sum(Total_Revenue) as TotalRev,
Sum(Total_Revenue) / (Select sum(Total_Revenue) from Customer_Data) * 100
as RevPercentage
from Customer_Data
Group by Customer_Status
```

```
SELECT State, Count(State) as TotalCount,
Count(State)*100.0 / (Select Count(*) from Customer_Data) as Percentage
from Customer_Data
Group by State
Order by Percentage desc
select distinct Internet_Type
from Customer_Data
```

Data Exploration – Check Nulls

```
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 Customer_Data;

```

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].[Customer_Data];

```

Create View for Power BI

```

Create View vw_ChurnData as
    select * from prod_Churn where Customer_Status In ('Churned', 'Stayed')
Create View vw_JoinData as
    select * from prod_Churn where Customer_Status = 'Joined'

```