**Capstone - WeTelco**

**Architecture:**

**Insights that can be drawn:**

We can draw the following insights based on the batch data provided.

1. \*\*Billing Insights: \*\*

* We can calculate the total revenue generated using the sum of bill\_amount
* We can identify the customers with the highest and lowest bills.
* We can obtain the average bill amount of each customer.
* We can track payment trends, such as on-time payments and late payments.
* We can determine which connection type generates more revenue.

2. \*\*Customer Information Insights:\*\*

* We can determine the age distribution of the customers using their DOB .
* We can determine the most commonly used email domains.
* We can determine Customer Tenure on the basis of billing data
* We can track the number of active and inactive customers
* We can determine which connection type has more active users.
* We can obtain the number of repeat customers.

- Segment customers based on value segment or connection type.

- Track customer churn rate.

- Identify the most common system status among customers.

* Calculate the average customer rating
* We can determine which plan has highest or lowest customer rating.

Segment customers by rating and analyze their characteristics.

4. \*\*Device Information Insights:\*\*

* Determine the most popular device brands and models among customers.

- Analyze the distribution of operating systems (OS) and OS vendors.

- Identify the most common IMEI TAC (Type Allocation Code) prefixes.

- Correlate device information with customer segments and ratings.

5. \*\*Plans Insights: \*\*

- Analyze the popularity of different service tiers.

- Assess the usage of voice, mobile data, and messaging services across plans.

- Evaluate the effectiveness of spam detection and fraud prevention features.

6. \*\*Cross-Dataset Insights: \*\*

* We can obtain the relation between bills paid and the customer rating, to know if higher bills lead to a bad customer rating

- Investigate whether certain plans are more popular among customers with specific characteristics.

7. \*\*Churn Analysis:\*\*

- Identify factors that contribute to customer churn (e.g., billing issues, low ratings).

- Analyze the timing of churn events (e.g., after billing or due date).

- Develop a churn prediction model based on historical data.

8. \*\*Customer Lifetime Value (CLV) Analysis:\*\*

- Calculate CLV for individual customers based on billing and usage history.

- Segment customers by CLV and tailor marketing strategies accordingly.

9. \*\*Customer Segmentation:\*\*

- Cluster customers into segments based on various features (e.g., usage patterns, demographics).

- Analyze the characteristics and behaviors of each customer segment.

10. \*\*Plan Performance Analysis:\*\*

- Evaluate the performance of different service plans in terms of revenue and customer satisfaction.

- Identify opportunities for plan optimization or development.