**Telecom Costumer Churn \_Case**

**Study Proposal**

1. **ABSTRACT**

The purpose of this project is to analyze customer churn data from database and identify key factors that contribute to customer attrition. By examining factors such as customer demographics, usage patterns, and service quality, we can gain insights into why customers are leaving and develop targeted strategies to reduce churn rates.

To accomplish this goal, we will use analytics techniques such as EDA and preprocessing .

1. **Business problem overview**

In the telecom industry, customers are able to choose from multiple service providers and actively switch from one operator to another. In this highly competitive market, the telecommunications industry experiences an average of 15-25% annual churn rate. Given the fact that it costs 5-10 times more to acquire a new customer than to retain an existing one, customer retention has now become even more important than customer acquisition.

For many incumbent operators, retaining high profitable customers is the number one business goal.

To reduce customer churn, telecom companies need to predict which customers are at high risk of churn.

1. **About Dataset**

The unbalanced dataset contains customer-level information for a span of four consecutive months - June, July, August and September. The months are encoded as 6, 7, 8 and 9, respectively.

Its contains 99,999 Rows and 226 Feature (A lot of them Unwanted data for for Usage churn phase ). Our label (Target is binary classification “churn ‘’)

[Telecom Churn Data (kaggle.com)](https://www.kaggle.com/datasets/hritikesinghrawat/telecom-churn-data).

1. **Objectives**

The business objective is to predict the churn in the last (i.e. the ninth) month using the data from the first three months. In churn prediction, we assume that there are three phases of customer lifecycle.

The ‘good’ phase: In this phase, the customer is happy with the service and behaves as usual.

The ‘action’ phase: The customer experience starts to sore in this phase.

The ‘churn’ phase: In this phase, the customer is said to have churned.

We are working over a four-month window, the first two months are the ‘good’ phase, the third month is the ‘action’ phase, while the fourth month is the ‘churn’ phase

1. **QUSITIONS MUST BE ANSWERD**

* What's the % of Churn Customers?
* What is the Tenure of customer based on aon in years (Age on Network)
* What is the total incoming and outgoing call by mounth?
* What is the best two months that describe the good periods ?
* Find the top call type have highest incoming and outging calls?
* What is the average revenue per costumer?
* What is the volume usage in megabytes 2G and 3G for the 3 months ?
* Is there any patterns/preference in Churn Customers based on the type of serviese usage ?
* during the analysis , more questions will be answered