

Business Problem Statement: Predicting Customer Churn in a Telecom Company

Problem description:

A telecom company is facing a high customer churn rate and wants to reduce it. Customer churn refers to the process where a customer stops doing business with a company. In the telecom industry, customer churn is a major problem as acquiring new customers is more expensive than retaining existing customers. The company wants to use machine learning to predict which customers are likely to churn so that they can take proactive measures to retain them.

About Dataset:

The dataset contains information on customer demographic, account information, services used, and whether or not they have churned. The target variable is a binary column indicating whether the customer has churned (1) or not (0).

Content :

Each row represents a customer, each column contains customer's attributes described on the column Metadata.

The data set includes information about:

1. Customers who left within the last month – the column is called Churn
2. Services that each customer has signed up for – phone, multiple lines, internet, online security, online backup, device protection, tech support, and streaming TV and movies
3. Customer account information – how long they've been a customer, contract, payment method, paperless billing, monthly charges, and total charges
4. Demographic info about customers – gender, age range, and if they have partners and dependents

Solution:

A supervised learning algorithm, such as logistic regression or decision trees, can be trained on the data to predict the likelihood of customer churn. The company can then use this model to identify at-risk customers and implement targeted retention strategies. Additionally, the company can use feature importance metrics to identify which factors are most strongly associated with customer churn and make changes to their business practices accordingly.