

Blitzkrieg On Campus Round

Since the launch of Jio in September 2016, the telecom industry is struggling with retaining their customers and have launched several plans, price cuts, etc. in order to prevent their customers from switching carriers. Every new such plan introduced has to be done after rigorous analysis of customer data database to understand which strategy will help in customer retention.

In this case study, we attempt to predict whether a customer will churn or not based on variety of characteristics. Past data is available for 7044 customers with the following columns:

- customerID: Customer ID
- gender: Customer gender (female, male)
- Senior_Citizen: Whether the customer is a senior citizen or not (1, 0)
- Partner: Whether the customer has a partner or not (Yes, No)
- Dependents: Whether the customer has dependents or not (Yes, No)
- Tenure: Number of months the customer has stayed with the company
- Phone_Service: Whether the customer has a phone service or not (Yes, No)
- Multiple_Lines: Whether the customer has multiple lines or not (Yes, No, No phone service)
- Internet_Service: Customer's internet service provider (DSL, Fiber optic, No)
- Online_Security: Whether the customer has online security or not (Yes, No, No internet service)
- Online_Backup: Whether the customer has online backup or not (Yes, No, No internet service)
- Device_Protection: Whether the customer has device protection or not (Yes, No, No internet service)
- Tech_Support: Whether the customer has tech support or not (Yes, No, No internet service)
- Streaming_TV: Whether the customer has streaming TV or not (Yes, No, No internet service)
- Streaming_Movies: Whether the customer has streaming movies or not (Yes, No, No internet service)
- Contract: The contract term of the customer (Month-to-month, One year, Two year)
- Paperless_Billing: Whether the customer has paperless billing or not (Yes, No)
- Payment_Method: The customer's payment method (Electronic check, Mailed check, Bank transfer (automatic), Credit card (automatic))
- Monthly_Charges: The amount charged to the customer monthly
- Total_Charges: The total amount charged to the customer
- Churn: Whether the customer churned or not (Yes or No)

We want you to answer the following questions based on this dataset:

1. What are the key factors which distinguish between customers that churn or those that do not?
2. Build a model to predict whether a customer will churn or not.
3. Given the model, what customer plans can you think of to reduce the churn rate (or equivalently increase customer retention)?