Telecom Churn Case Study

upGRAD

By:

Archana
Abhishek Parihar
Agam Bhatnagar

Business Objectives

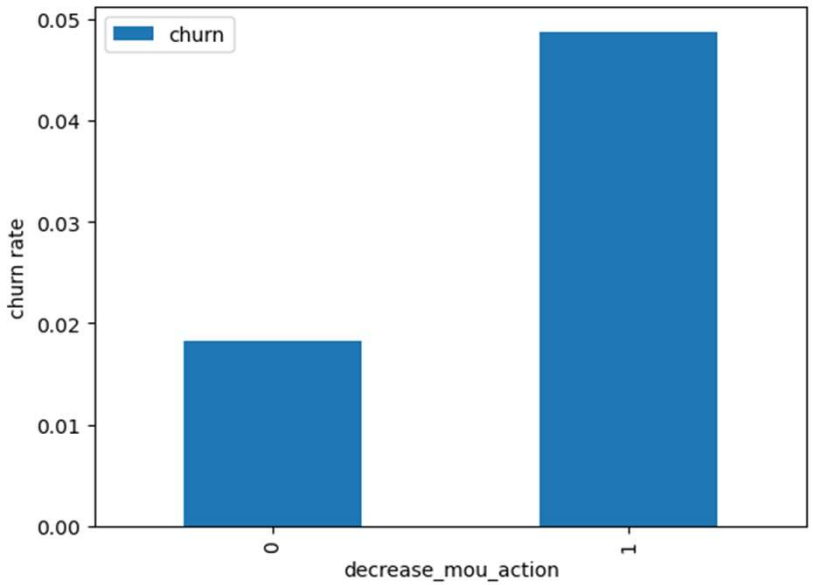
Customers in the telecom sector have the option to actively switch between multiple service providers and choose which one to use. Retaining highly profitable clients is the top priority for many established operators. In order to lower customer attrition, telecom providers must identify which customers are most likely to leave.

Problem Statement

Examine customer-level data from a top telecom company, create prediction models to find high-risk users, and pinpoint the primary churn signs. use the information (features) from the first three months to forecast the churn in the ninth month

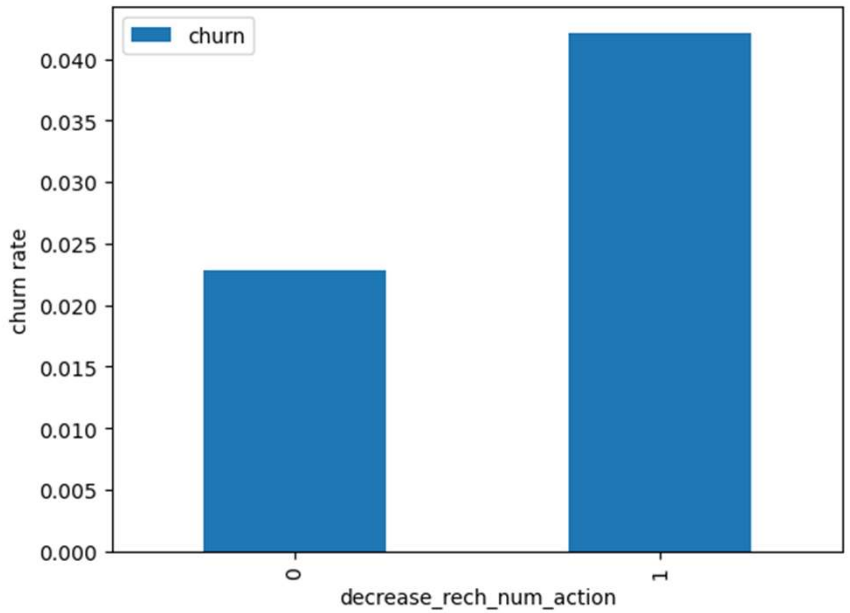
Churn rate determined by whether the client lowered their MOU during the action month

Client turnover is higher for individuals whose minutes of usage (MoU) dropped during the action phase than for those whose MoU increased during the positive phase.



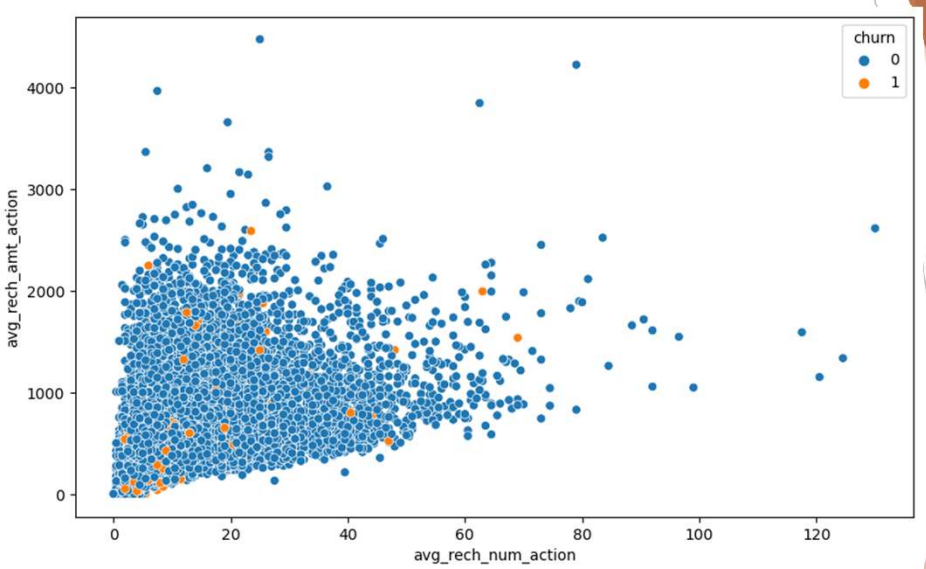
Churn rate based on whether the client reduced their recharge during the action month

We observe the same phenomenon here as well. Customers whose amount of recharge in the action phase is less than the amount in the good phase have a higher turnover rate.



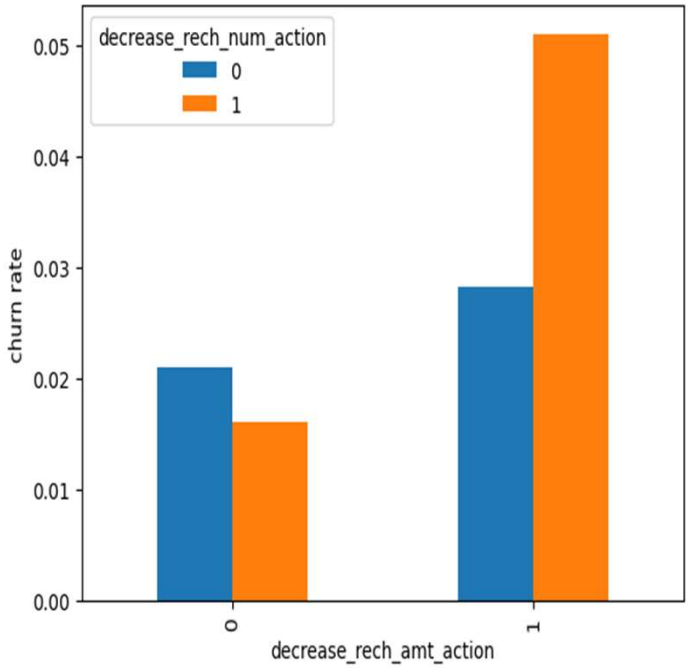
Analyzing the quantity and frequency of recharges during the activity month

The recharge quantity and number are predominantly proportional, as the pattern above demonstrates. The amount of recharge increases with the number of recharges.



Analyzing the churn rate in relation to the declining amount and frequency of recharges during the action phase

The accompanying graphic shows that consumers whose number and amount of recharges have reduced during the action phase compared to the good phase have a higher churn rate.



Business Recommendation

Variables	Coefficients
loc_ic_mou_8	-3.3287
og_others_7	-2.4711
ic_others_8	-1.5131
isd_og_mou_8	-1.3811
decrease_vbc_action	-1.3293
monthly_3g_8	-1.0943
std_ic_t2f_mou_8	-0.9503
monthly_2g_8	-0.9279
loc_ic_t2f_mou_8	-0.7102
roam_og_mou_8	0.7135

The majority of the top variables, as can be seen, have negative coefficients. In other words, the churn probability and the variables have an inverse relationship.

For eg: A larger probability of customer attrition exists if the local inbound minutes of usage (loc_ic_mou_8) is lower in August than in any other month.

Suggestions

1. Target the clients who, throughout the action phase (mostly in August), have less minutes of consumption for incoming local calls and outgoing ISD calls.
2. Focus on the clients who have lower outgoing and incoming costs in July and August, respectively.
3. In addition, consumers with higher value-based costs during the action phase have a higher churn rate than other customers. Therefore, these clients can be a potential target for an offer.
4. Customers who renew their 3G monthly in August more frequently are more likely to be churned.
5. Customers are more likely to churn if their STD incoming minutes of consumption for operators T to fixed lines of T decrease in August.
6. Customers who cut back on their monthly 2g usage in August are likely to churn.
7. Customers are more likely to churn if their incoming minutes of consumption for operators T to fixed lines of T decrease in August.
8. The variables roam_og_mou_8 exhibit positive coefficients (0.7135). This implies that customers are more likely to churn if their roaming outgoing minutes of usage are rising.

Thank You