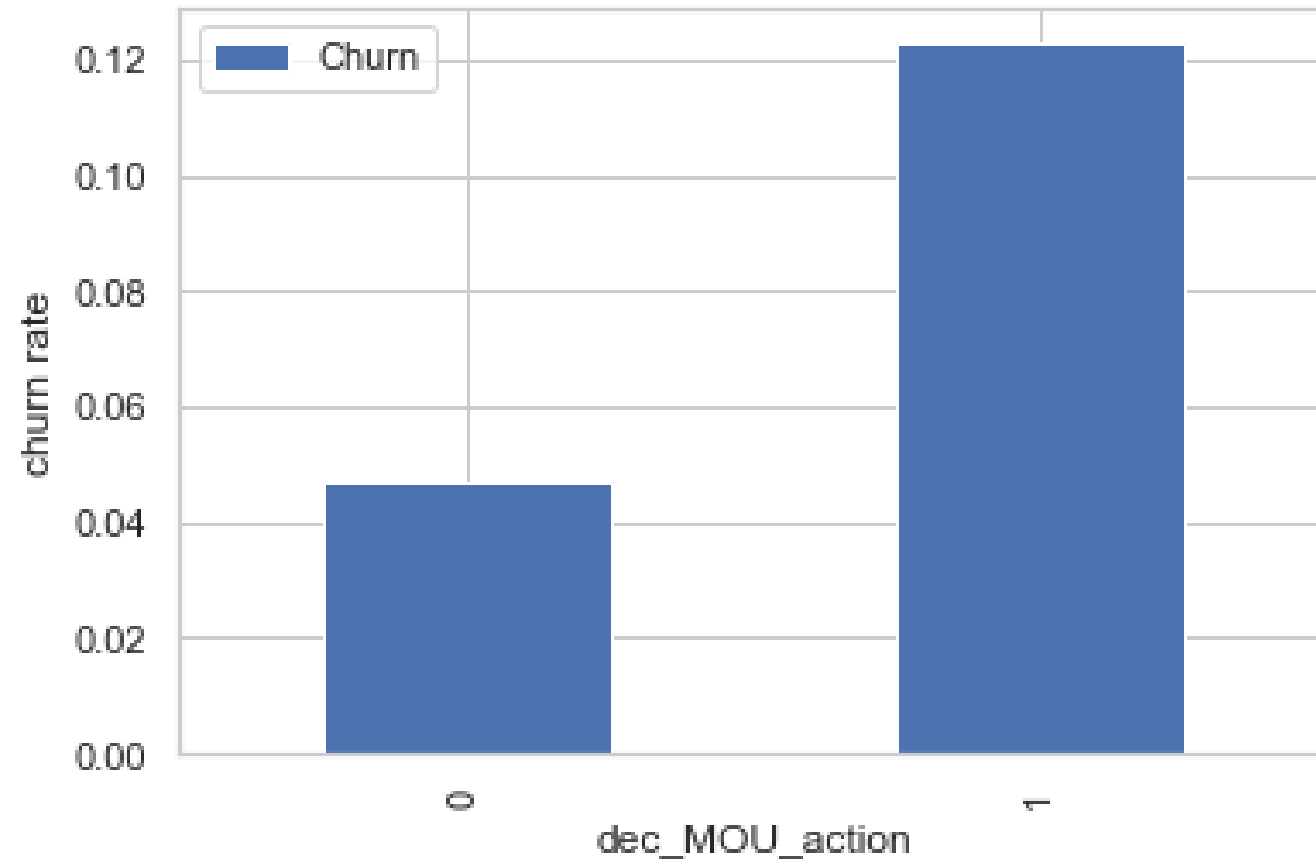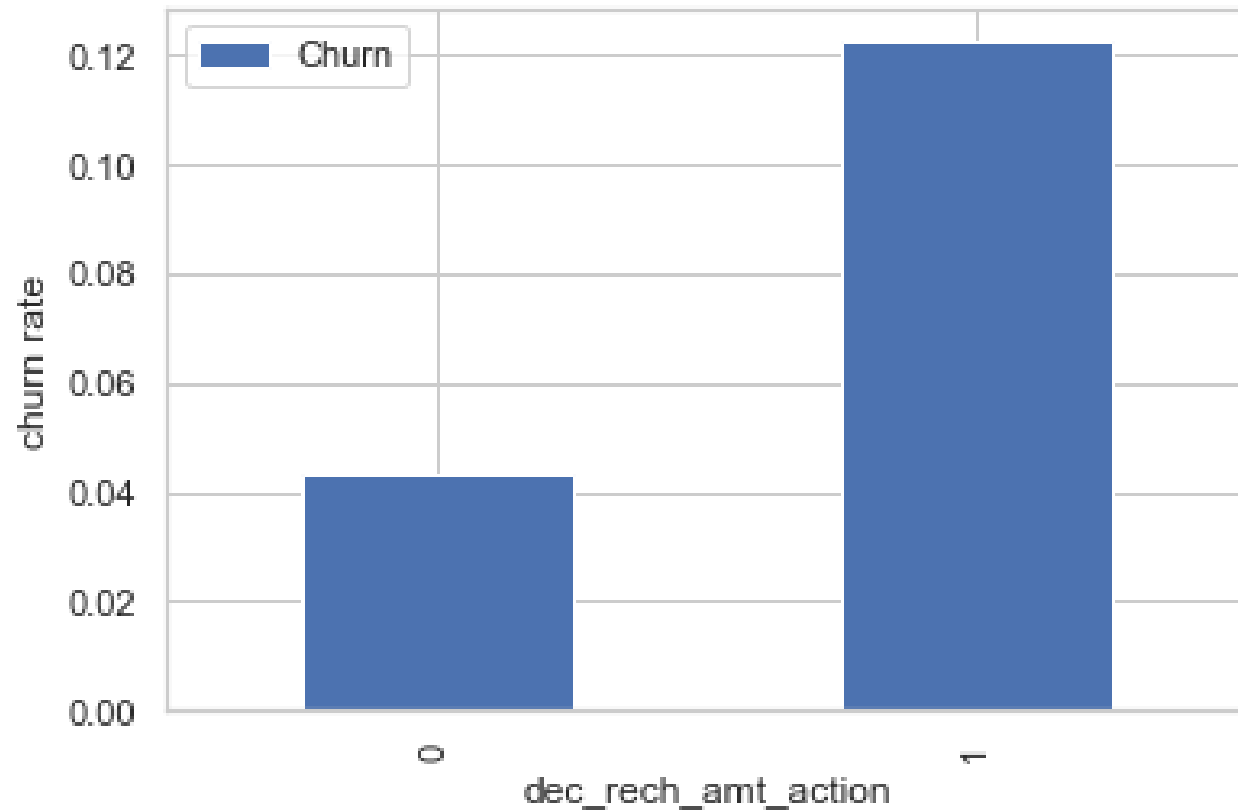# TELECOM CHURN CASE STUDY

# Churn rate on the basis whether the customer decreased her/his MOU in action month

We can see that the churn rate is more for the customers, whose minutes of usage(mou) decreased in the action phase than the good phase.

# Churn rate on the basis whether the customer decreased amount of recharge in action month

Here also we see the same behaviour. The churn rate is more for the customers, whose amount of recharge in the action phase is lesser than the amount in good phase.

Analysis of the minutes of usage MOU (churn and not churn) in the action phase
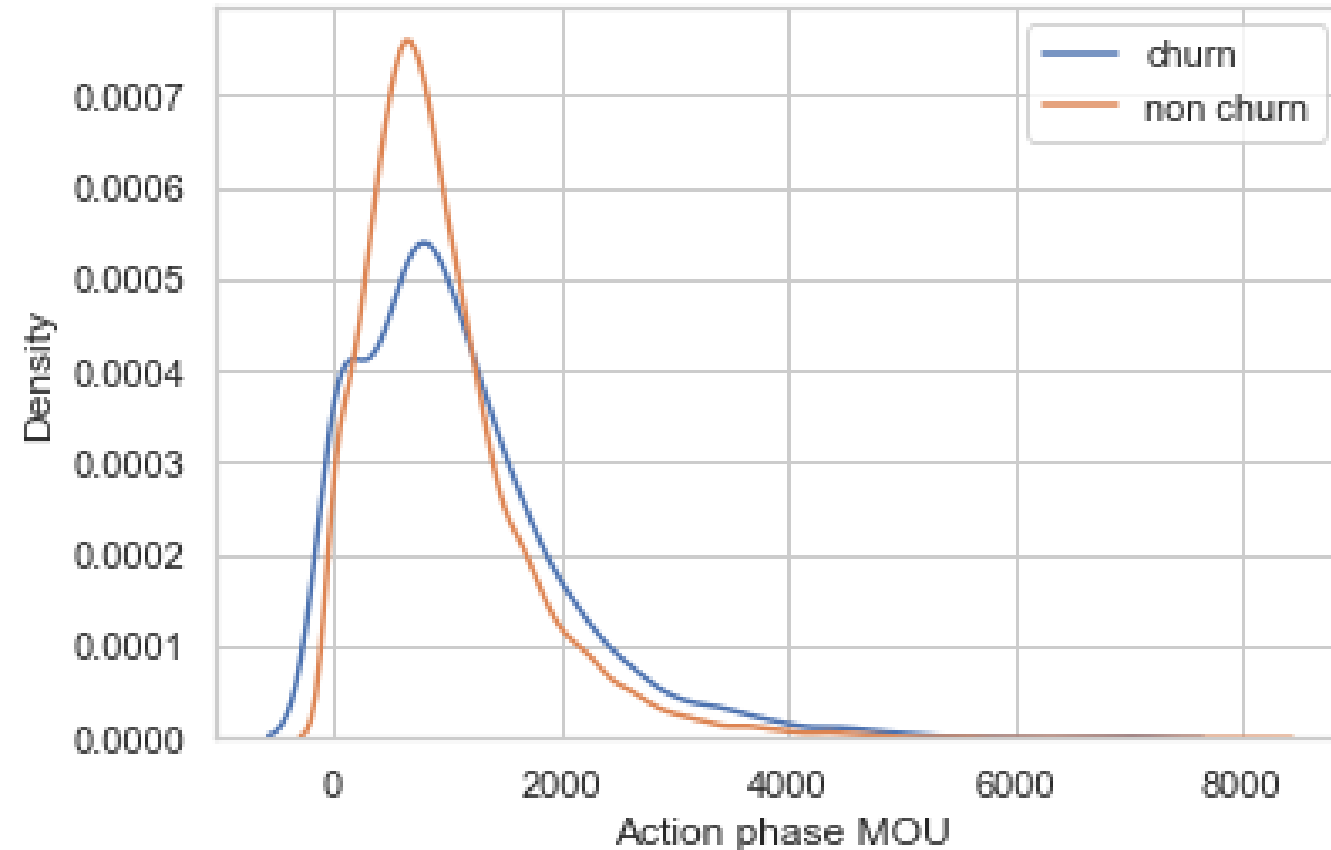

Minutes of usage(MOU) of the churn customers is mostly populated on the 0 to 2500 range. Higher the MOU, lesser the churn probability.

Analising recharge amount and number of recharge in action month
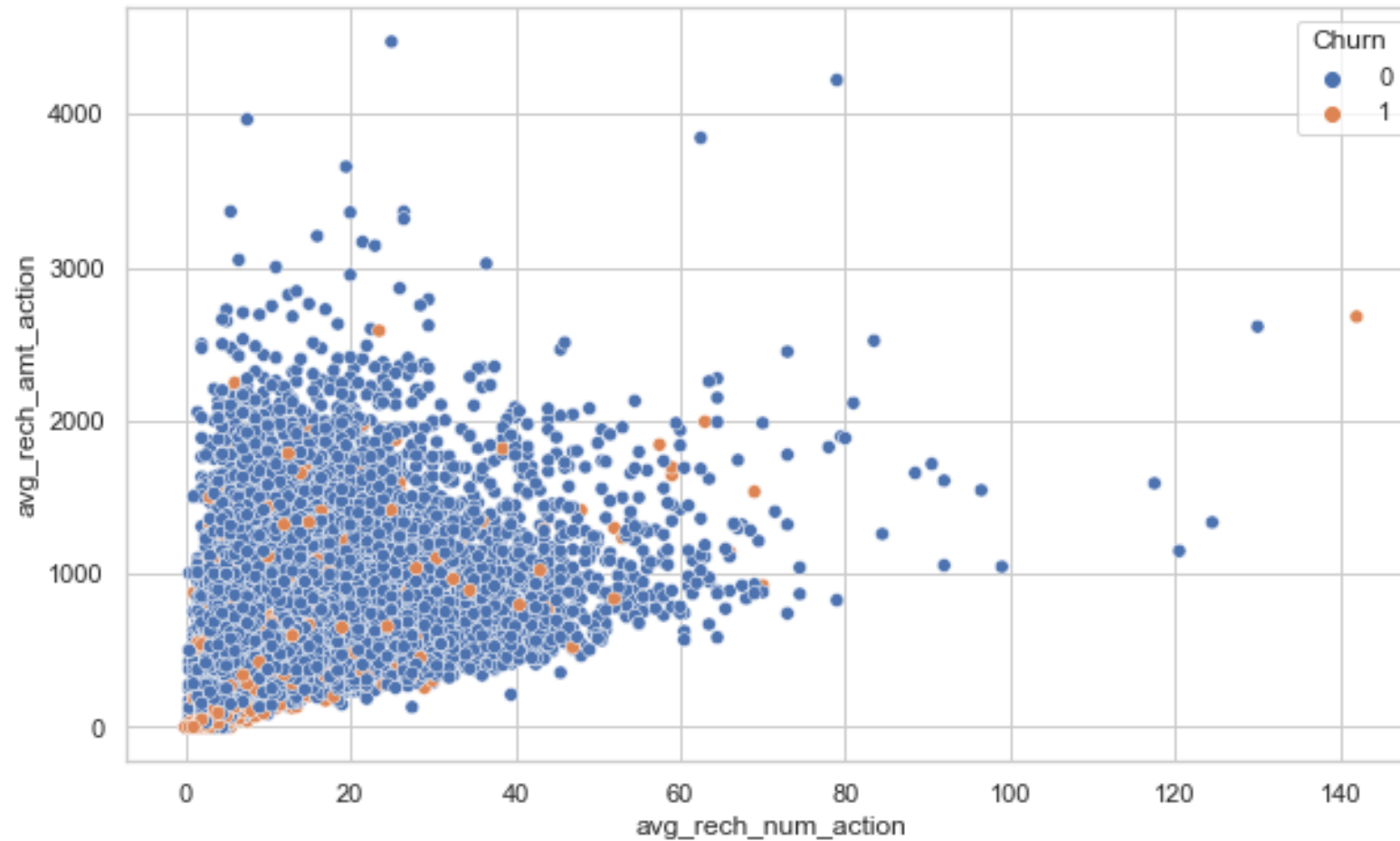
We can see from the pattern that the recharge number and the recharge amount are almost proportional. Higher the number of recharge, Higher is the amount of the recharge

Analyzing churn rate WRT the decreasing recharge amount and number of recharge during the action phase
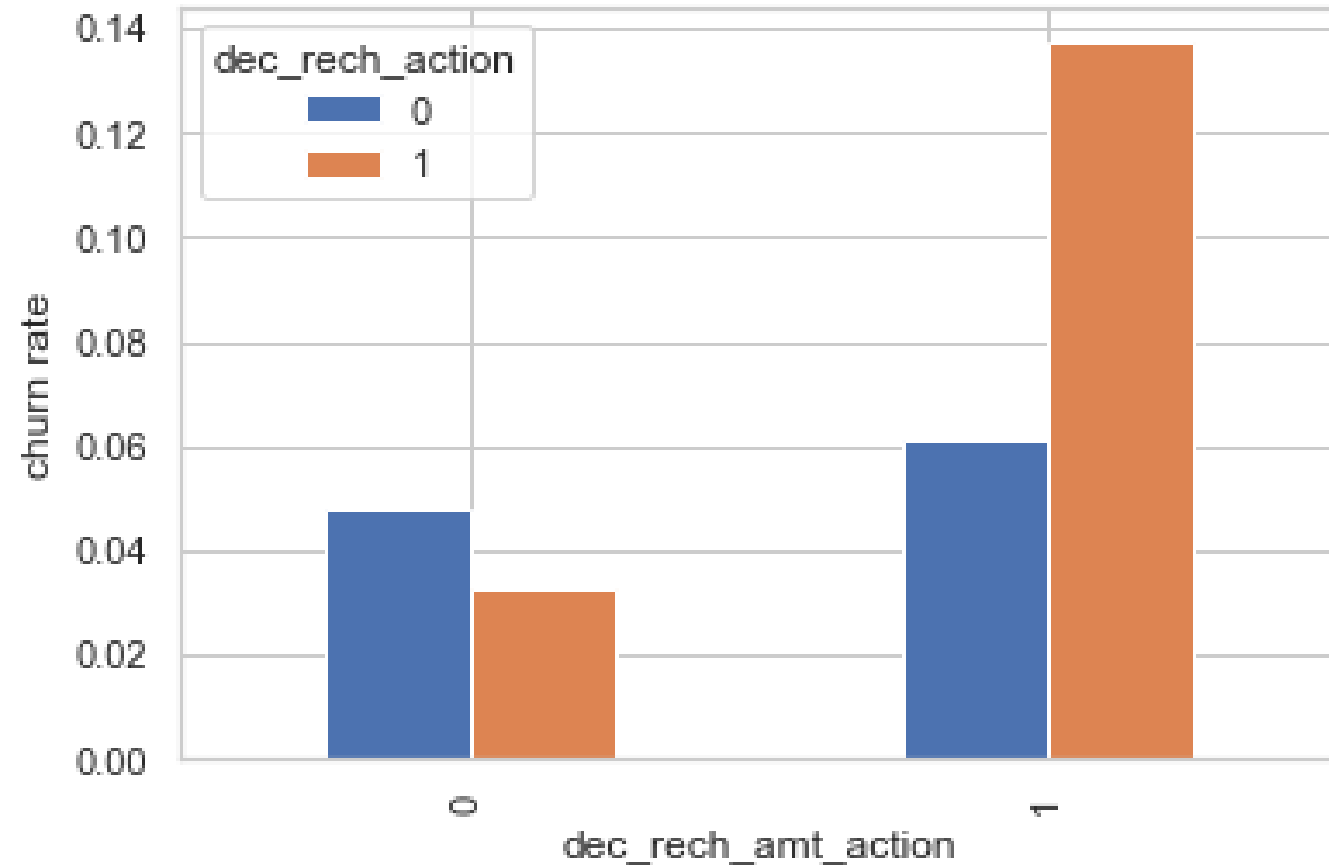
We can see from the above plot, that the churn rate is higher for the customers, whose recharge amount as well as number of recharge have decreased in the action phase when compared to the good phase.

COMPLETE MODEL STATS

	model	Recall	Test accuracy	Roc_auc_score
1	Decision Tree with PCA	0.89	0.83	0.77
0	Logistic Regression with PCA	0.87	0.83	0.88
3	Logistic without PCA	0.82	0.79	0.76
2	Random Forest with PCA	0.70	0.87	0.88

Conclusion and STRATEGY ahead

- 1. From EDA, we observed that there is considerable drop in recharge, call usage and data usage in the 8th month which is the `Action Phase`. Below are the important features:

loc_og_t2m_mou_7, total_og_mou_6, loc_og_t2t_mou_7, roam_ic_mou_7, onnet_mou_7, arpu_7, loc_og_t2c_mou_7, onnet_mou_8, roam_og_mou_8, arpu_6

- 2. Average revenue per user in the `7th month` plays a vital role in deciding churn. A sudden drop in it might indicate that the customer might be thinking about churning and appropriate actions should be taken.

- 3. Local Minutes of usage (outgoing) are the most affecting features on the customer churn.

- 4. Roaming Minutes of usage (incoming & outgoing) are also affecting features on the customer churn.

- 5. Total minutes of usage for outgoing is also an important factor affecting the churn.

Following strategies can be incorporated :

- Sudden drop in Local Minutes of usage might be because of the unsatisfactory customer service or because of poor network or unsuitable customer schemes/plans. Efforts shall be made to provide better network and focus on customer satisfaction.

- - Based on the usage / last recharge/ on net usage, routine feedback calls should be made for customer satisfaction and services that can understand their grievances & expectations. Appropriate action should be taken to avoid them from churning.

- Various attractive offers can be introduced to customers showing sudden drop in total amount spent on calls & data recharge in the action phase to lure them.

- Customised plans should be provided to such customers to stop them from churning.

- Promotional offers can also be very helpful