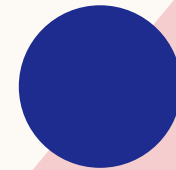


TELECOM CHURN DOMAIN ORIENTED CASE STUDY

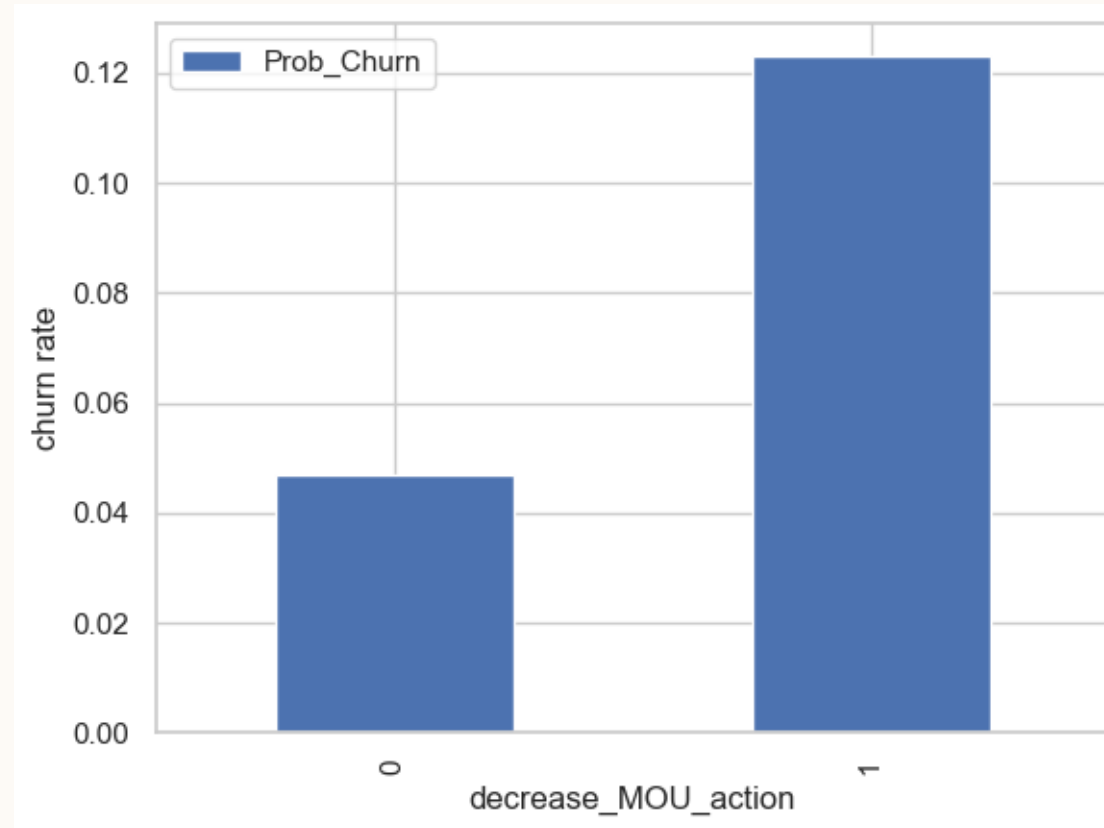
Hema Kiran Yadla

PROBLEM STATEMENT

Analyze customer-level data from a prominent telecommunications company, create predictive models to identify clients at high risk of churn, and identify the main churn indicators.

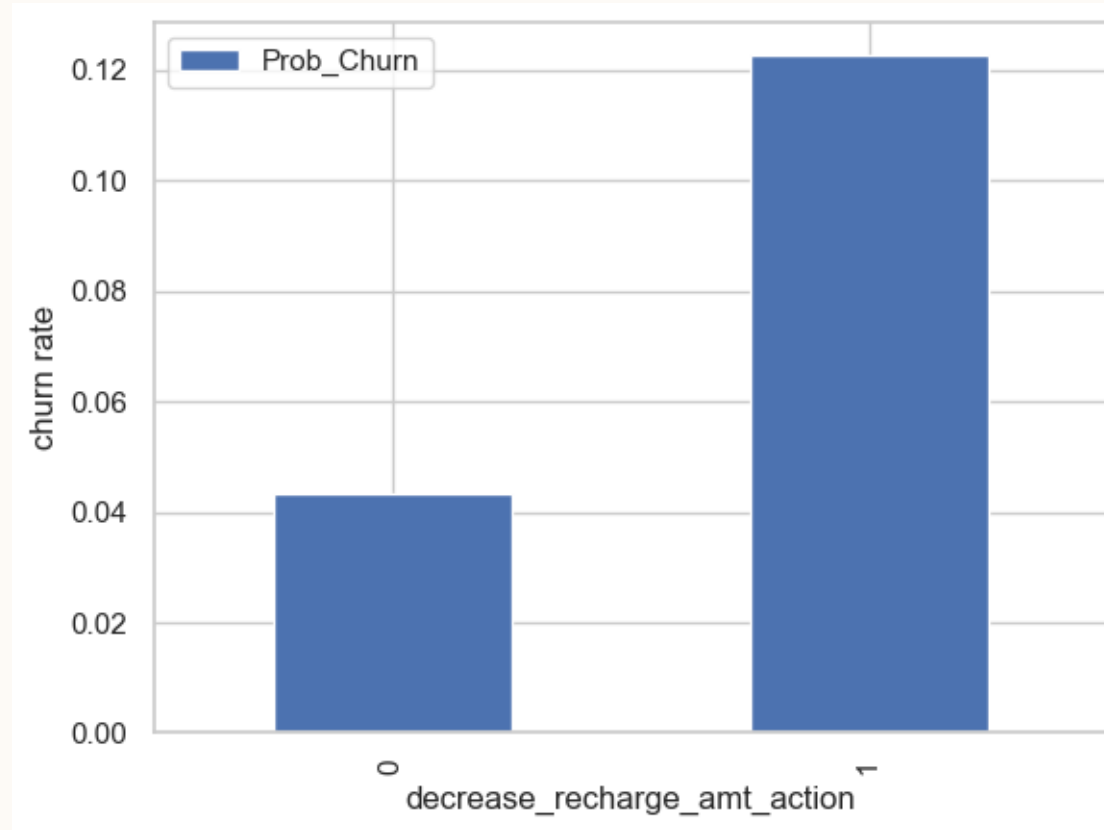


DECREASED THEIR MOU IN THE ACTION MONTH



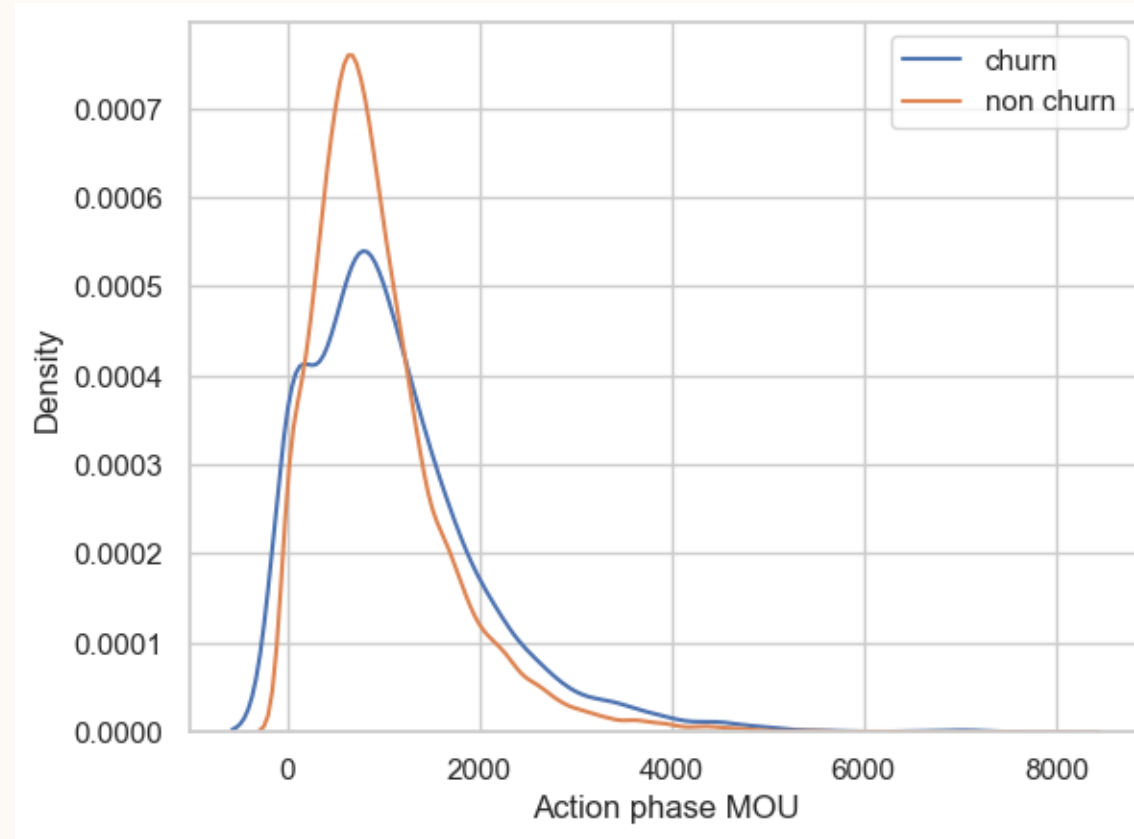
Customers whose minutes of usage (MoU) declined during the action phase churned at a faster rate than those whose MoU increased during the positive phase.

CHURN RATE W.R.T DECREASED THE AMOUNT OF RECHARGE IN THE ACTION MONTH



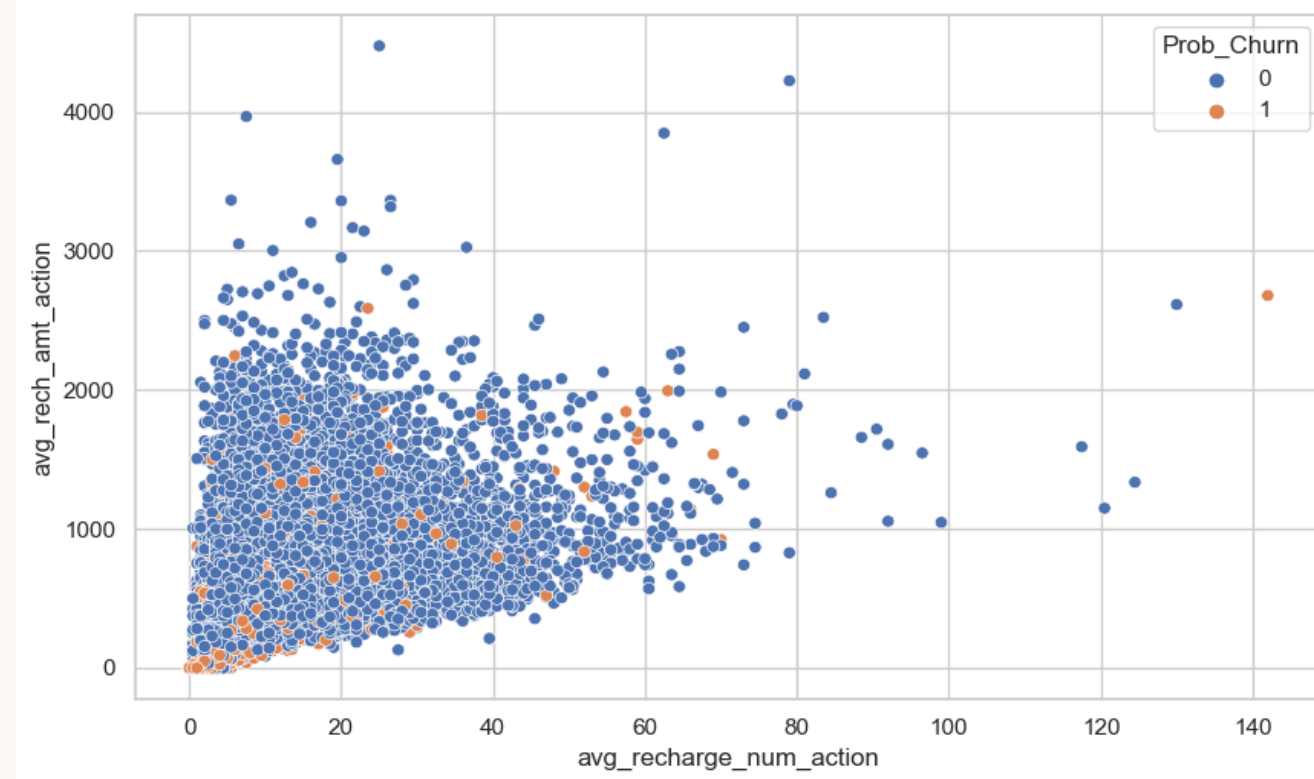
We see the same behaviour here as well. The churn rate is higher for consumers whose recharge amount in the action phase is less than the amount in the good phase.

ANALYSIS OF THE MINUTES OF USAGE MOU (CHURN AND NOT CHURN) IN THE ACTION PHASE



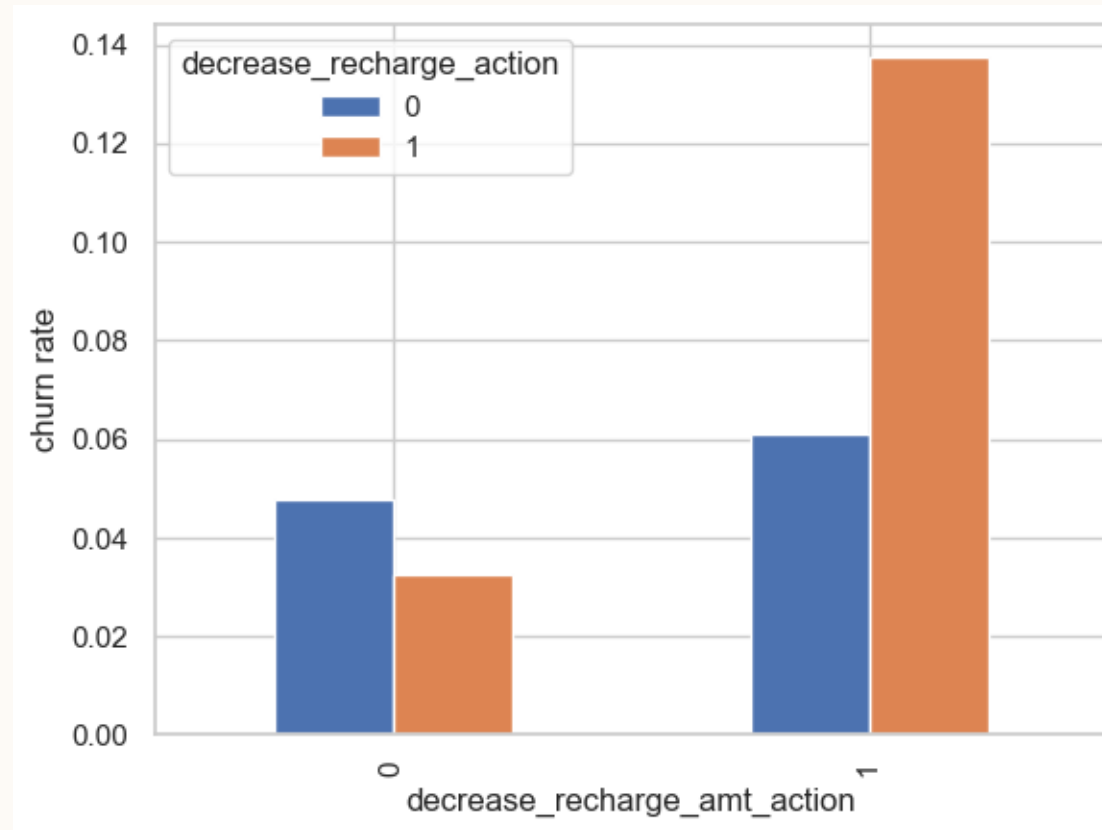
Customers that churn typically have minutes of usage (MOU) ranging from 0 to 2500. The higher the MOU, the lower the likelihood of churn.

ANALYSING AVG RECHARGE AMOUNT AND AVG NUMBER OF RECHARGE IN ACTION MONTH



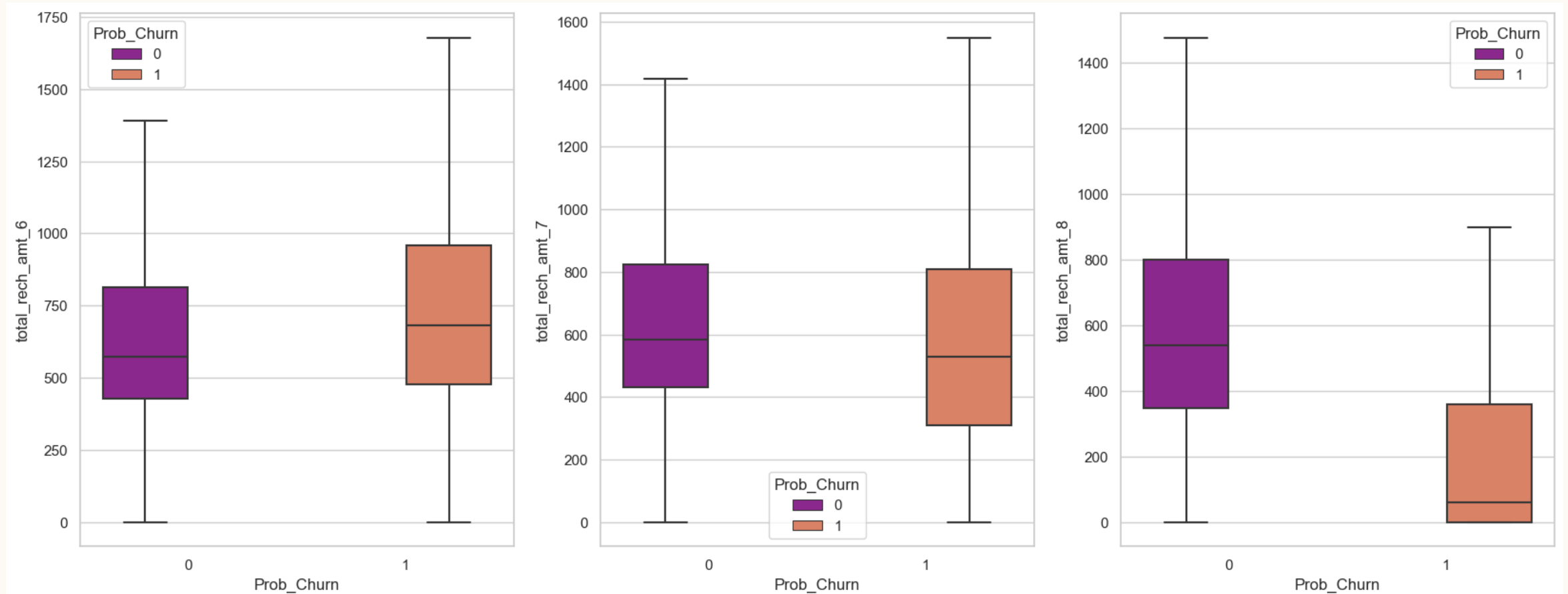
The pattern shows that the recharge number and the recharge amount are almost proportionate. The amount of the recharge increases as the number of recharges increases.

ANALYSING CHURN RATE WRT THE DECREASING RECHARGE AMOUNT AND NUMBER OF RECHARGE DURING THE ACTION PHASE

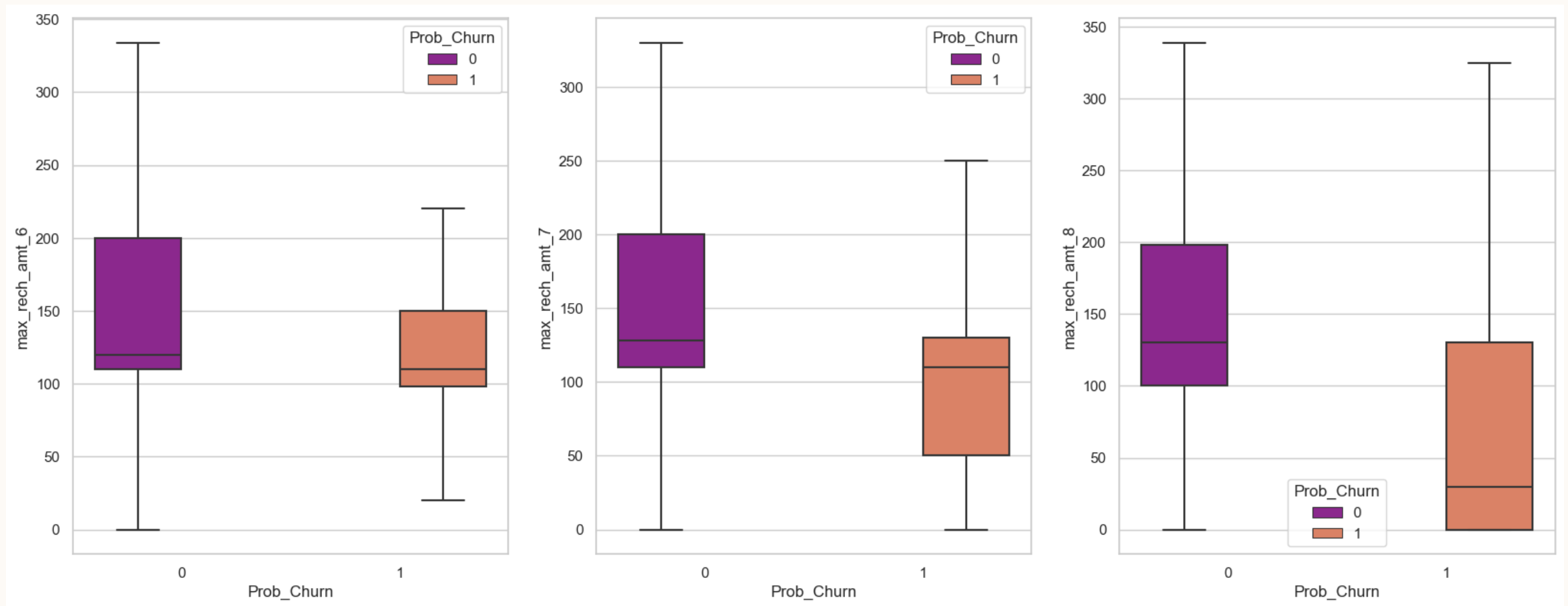


The accompanying graphic shows that the churn rate is higher for consumers whose recharge amount and number of recharges have fallen in the action phase compared to the good phase.

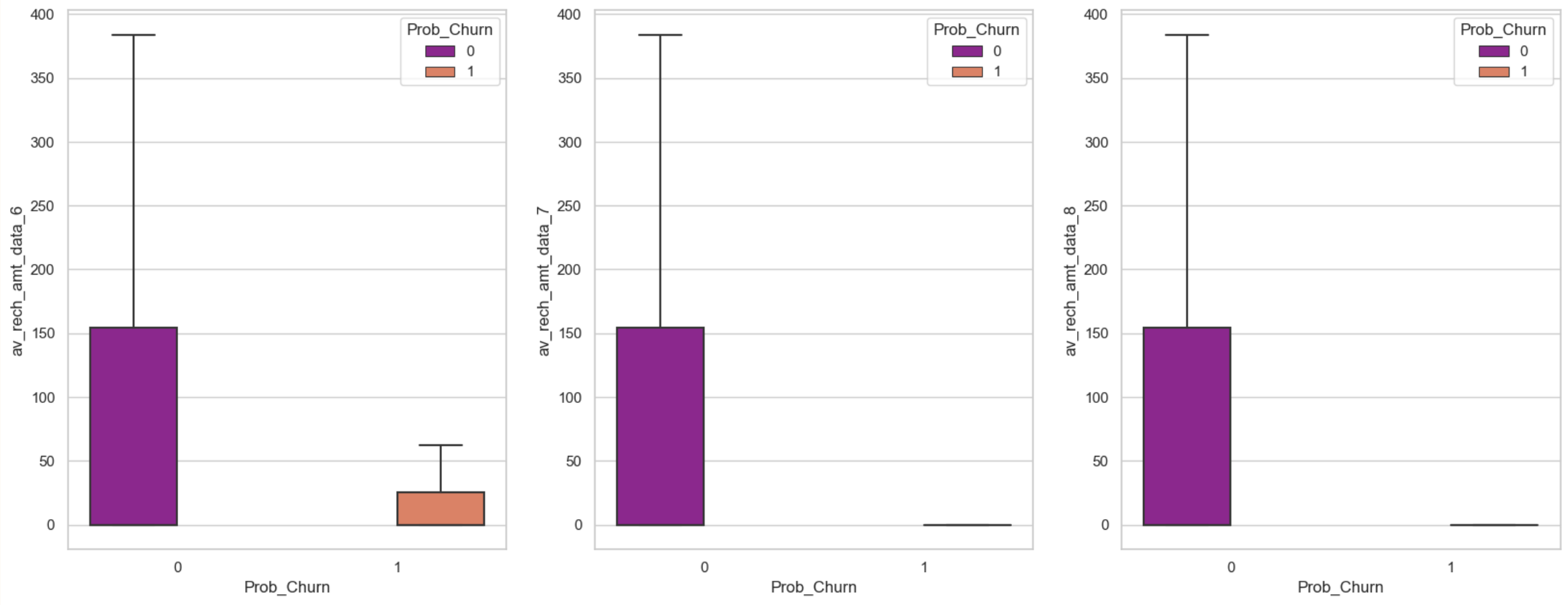
PLOT BOX – TOTAL RECHARGE AMOUNT



PLOT BOX – MAX RECHARGE AMOUNT



PLOT BOX – AVG RECHARGE AMOUNT



COMPLETE MODEL STATS

	Model	Recall	Test Accuracy	Test 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. According to EDA, there is a significant decline in recharge, call usage, and data usage in the eighth month, which is the 'Action Phase'. The following are the key 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. The average revenue per user in the '7th month' is critical in determining churn. A sudden decline in it could suggest that the customer is considering leaving, and immediate action should be taken.
3. Local minutes of usage (outgoing) have the greatest impact on customer attrition.
4. Roaming Minutes of consumption (incoming and outgoing) also have an impact on customer attrition.
5. Total minutes of outgoing usage is another major factor influencing turnover.

FOLLOWING STRATEGIES CAN BE INCORPORATED

1. A dramatic decline in Local Minutes consumption could be the result of poor customer service due to a weak network or inadequate customer schemes/plans. Efforts will be made to improve the network and to prioritize customer happiness.
2. Routine feedback calls should be made based on consumption / last recharge / net usage for customer satisfaction and services that can grasp their frustrations & expectations. To prevent them from churning, appropriate action should be taken.
3. To entice clients, several appealing offers might be presented to them, such as a rapid decrease in the total amount spent on calls and data recharge during the action period.
4. Such consumers should be offered customized plans to keep them from churning.
5. Promotional deals might also be extremely beneficial.



THANK YOU

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