DOMAIN ORIENTED CASE STUDY

PRESENTED BY

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PROBLEM UNDERSTANDING

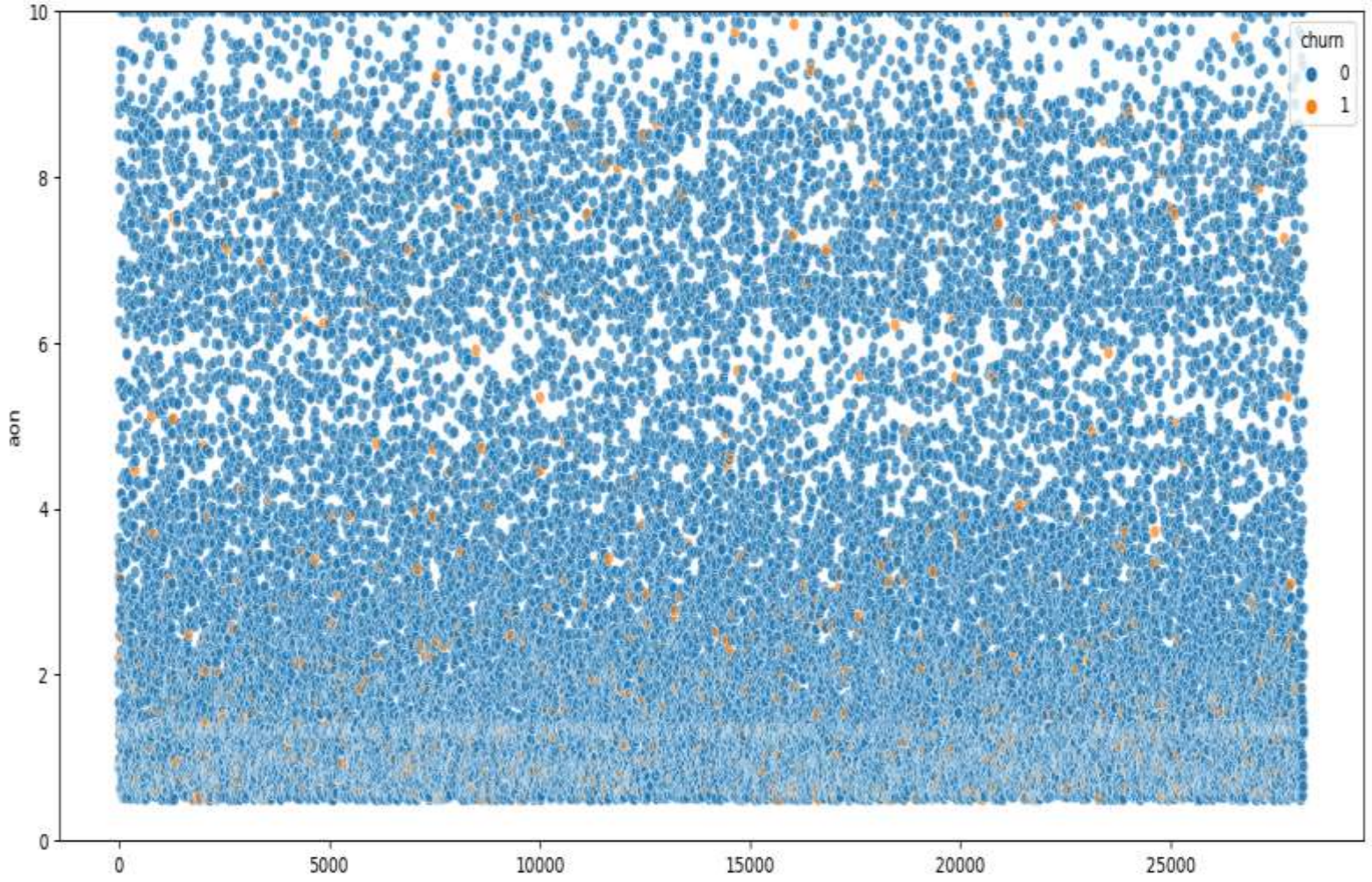
"In the fiercely competitive telecommunications industry, the annual churn rate averages between 15-25%. With the understanding that it costs 5-10 times more to acquire a new customer than to retain an existing one, customer retention is now paramount over customer acquisition.“

GOAL TO OVER COME FROM PROBLEM

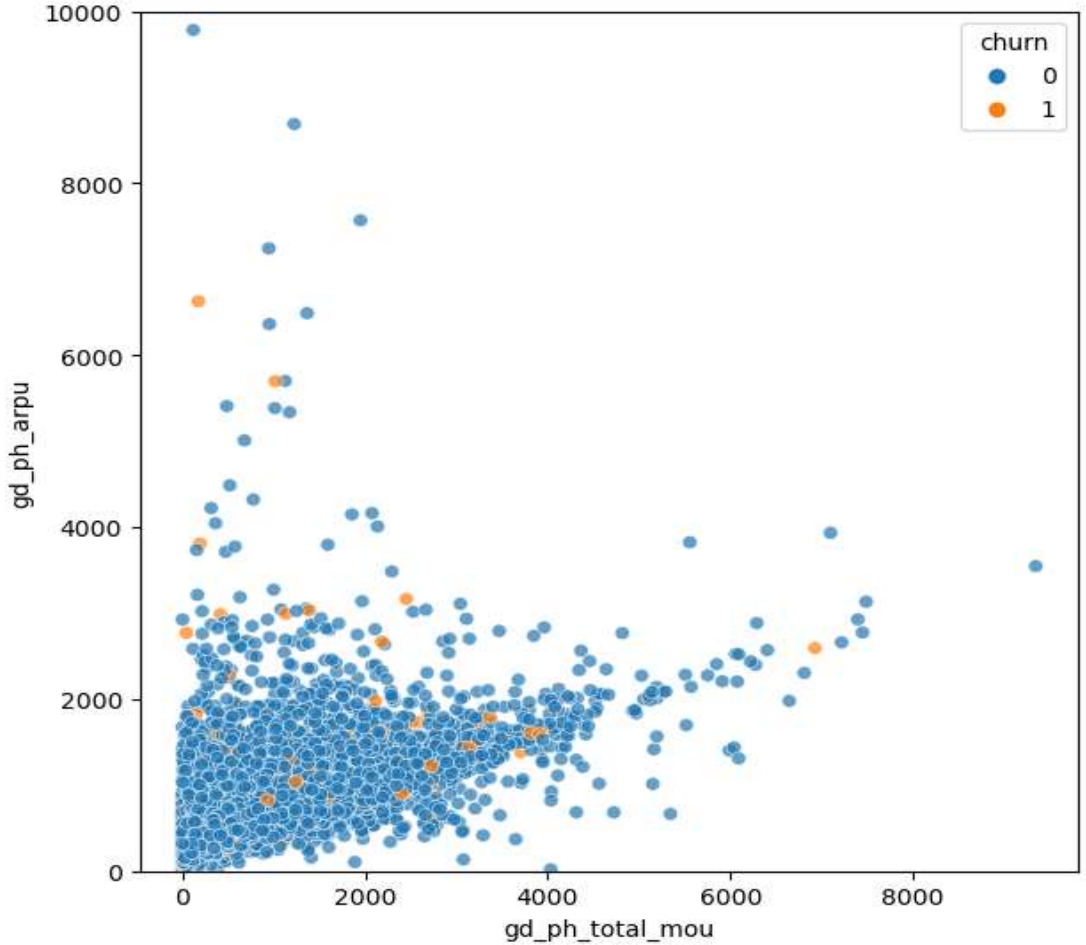
The number one business goal for many established operators is to retain highly profitable customers.

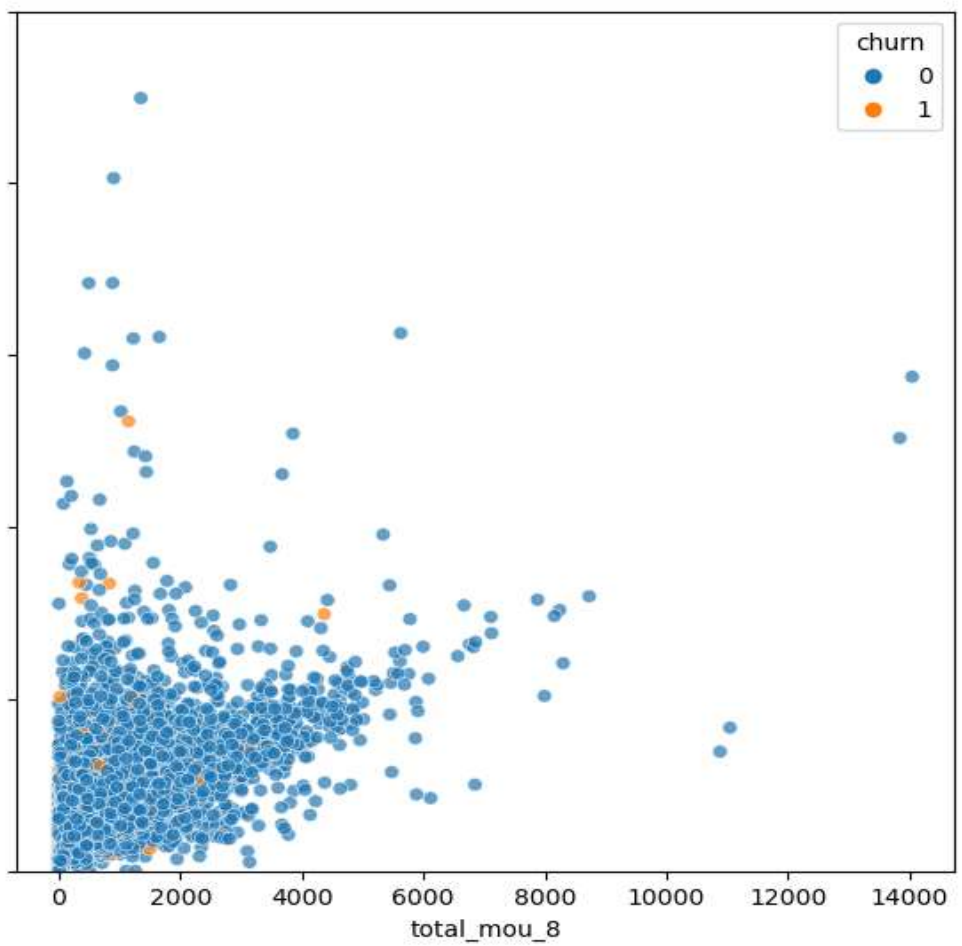
To reduce customer churn, telecom companies need to predict which customers are at high risk of churn.

ANALYSIS BETWEEN TWO FEATURE

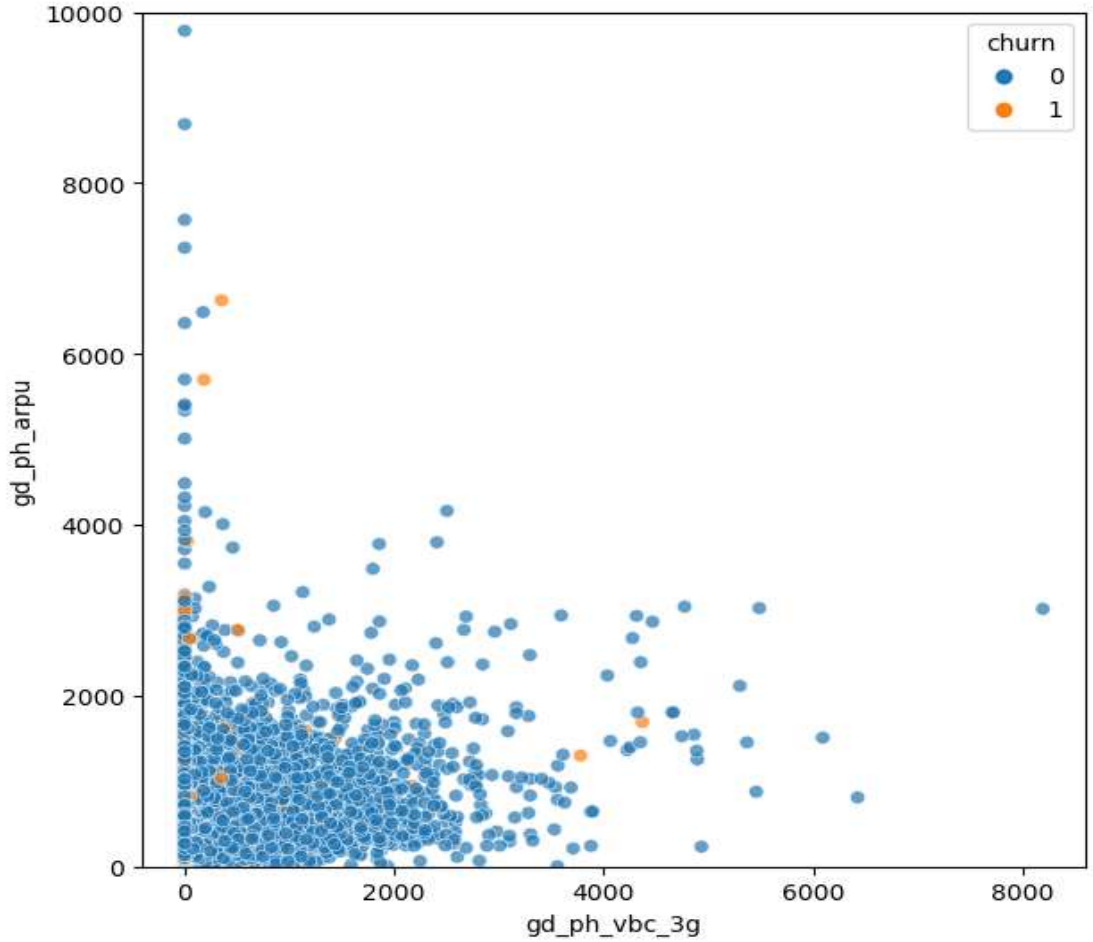


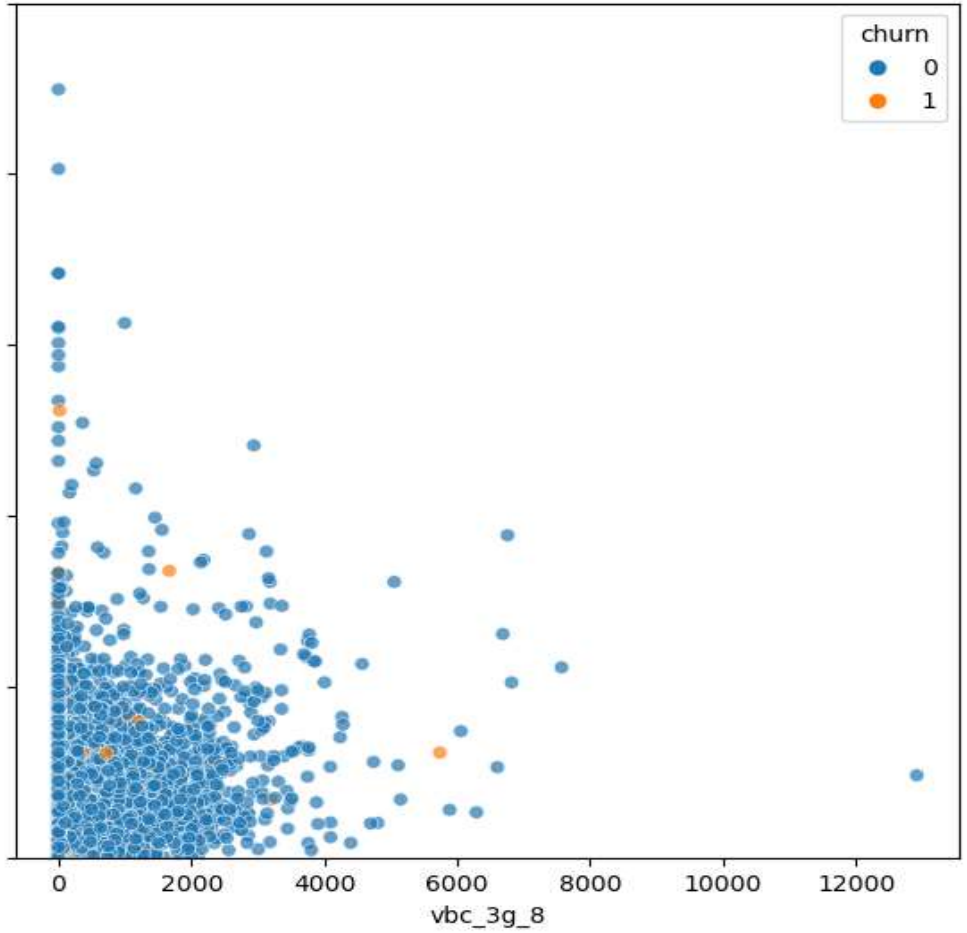
we can notice that the majority of churners had a tenure of less than 4 years.



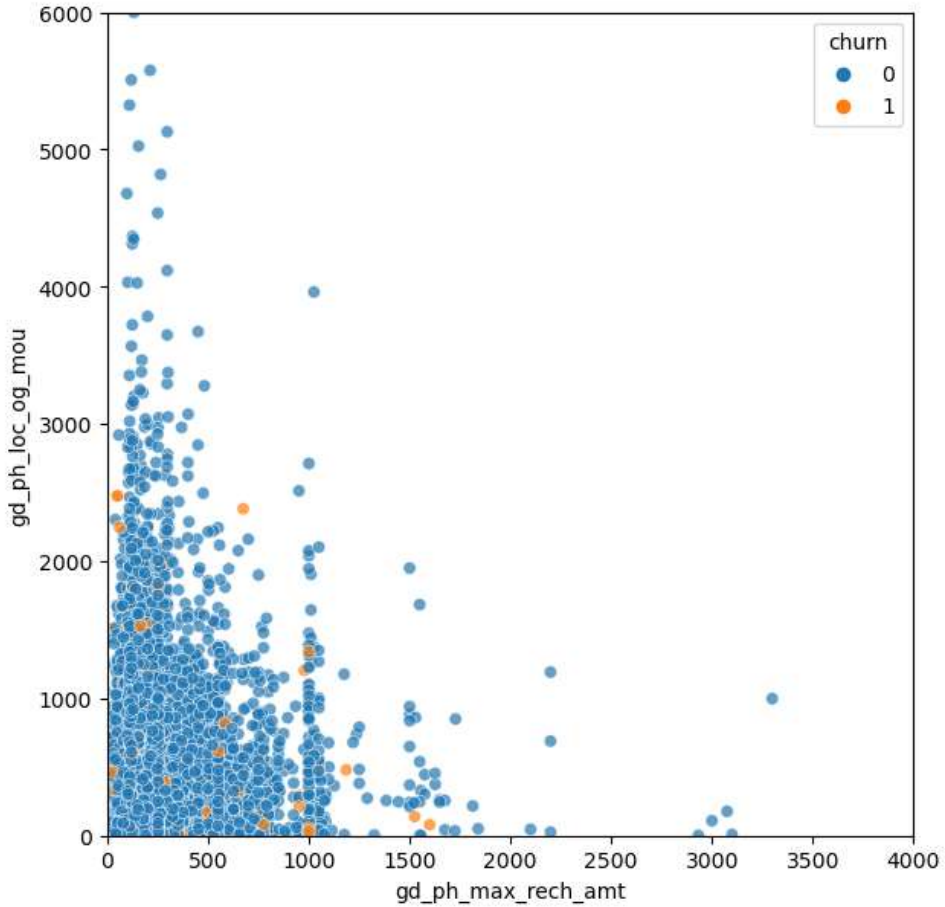


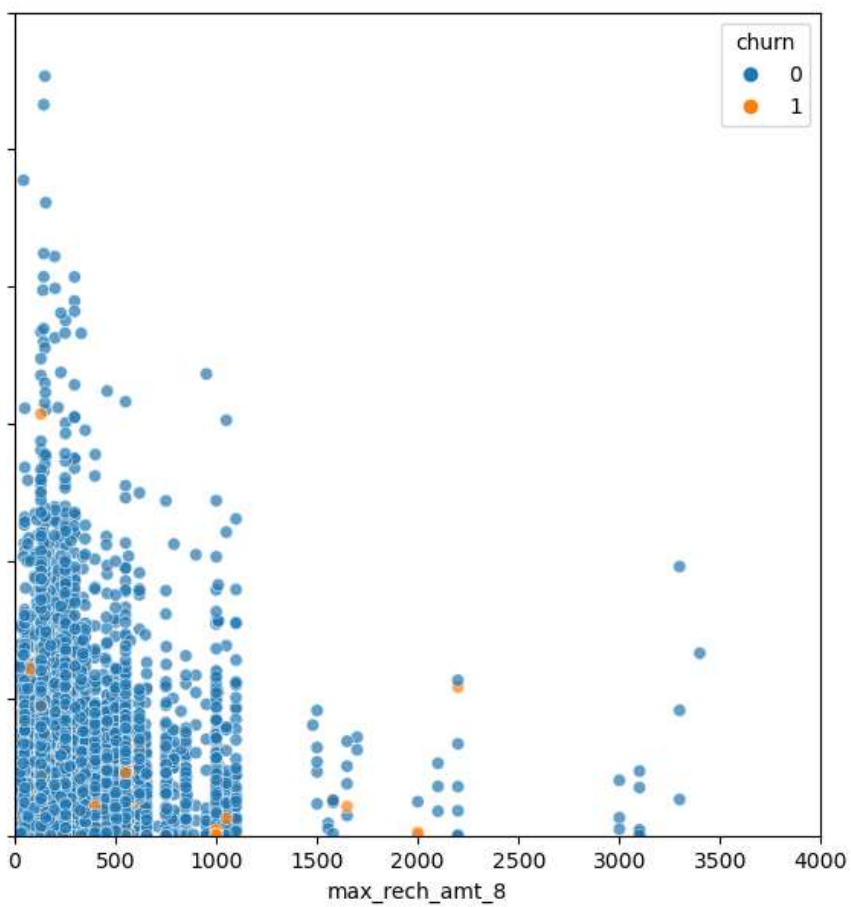
The drop in MOU for the churners in the action phase, particularly in the 8th month, has significantly impacted the generated revenue. It is noteworthy that despite the MOU being between 0-2000, the revenue is highest in that range, indicating that these users had other services that were contributing to the revenue.



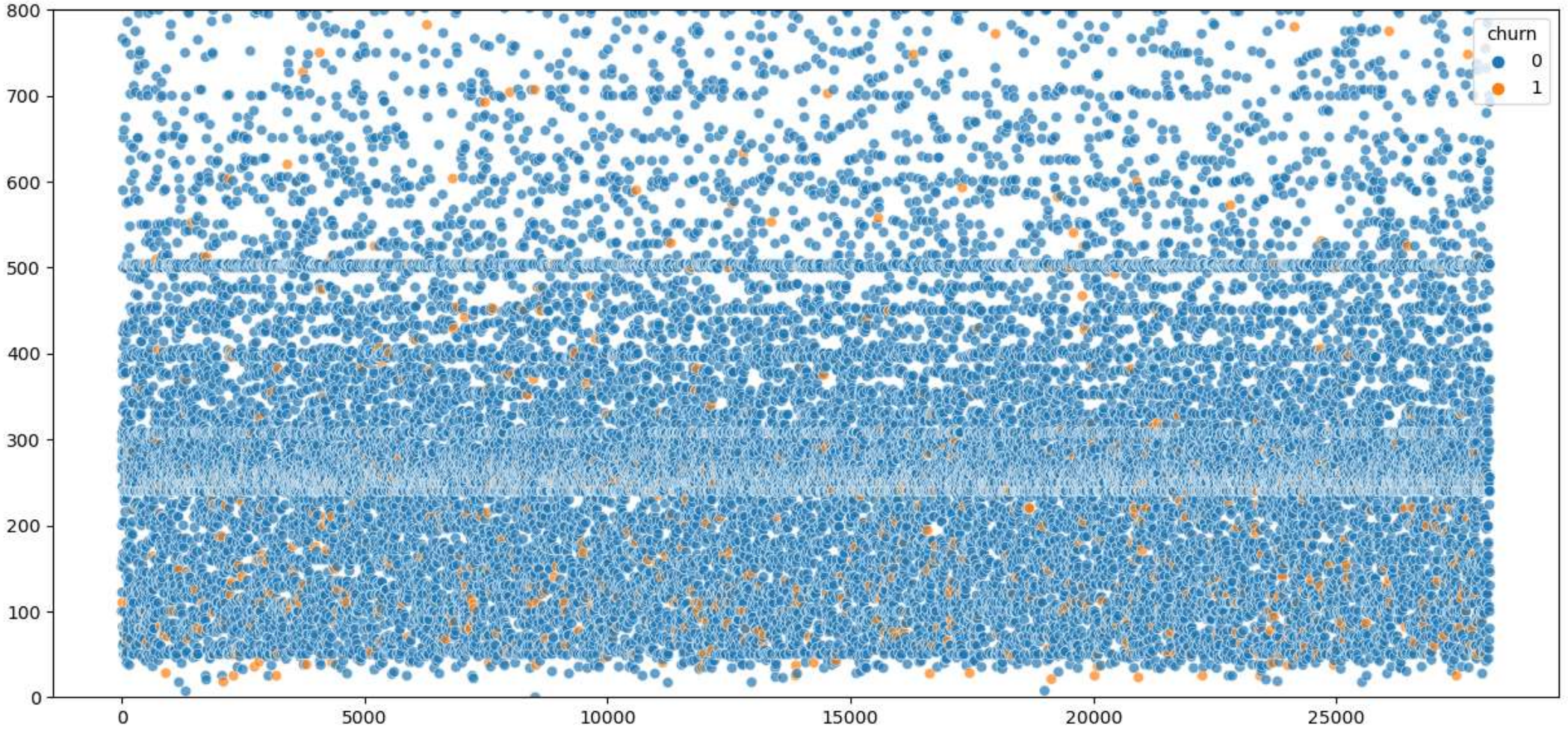


We noticed that users who consumed very little VBC data but generated high revenue churned. Once again, we observed higher revenue on the lower consumption side.

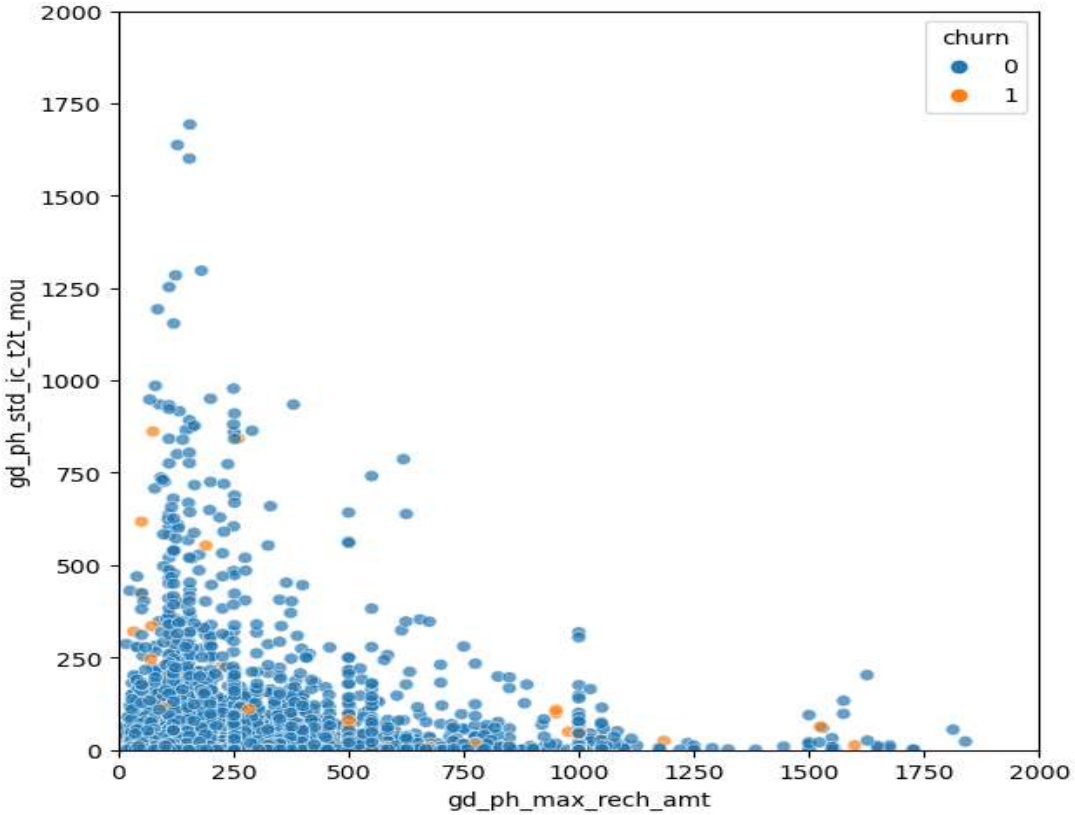


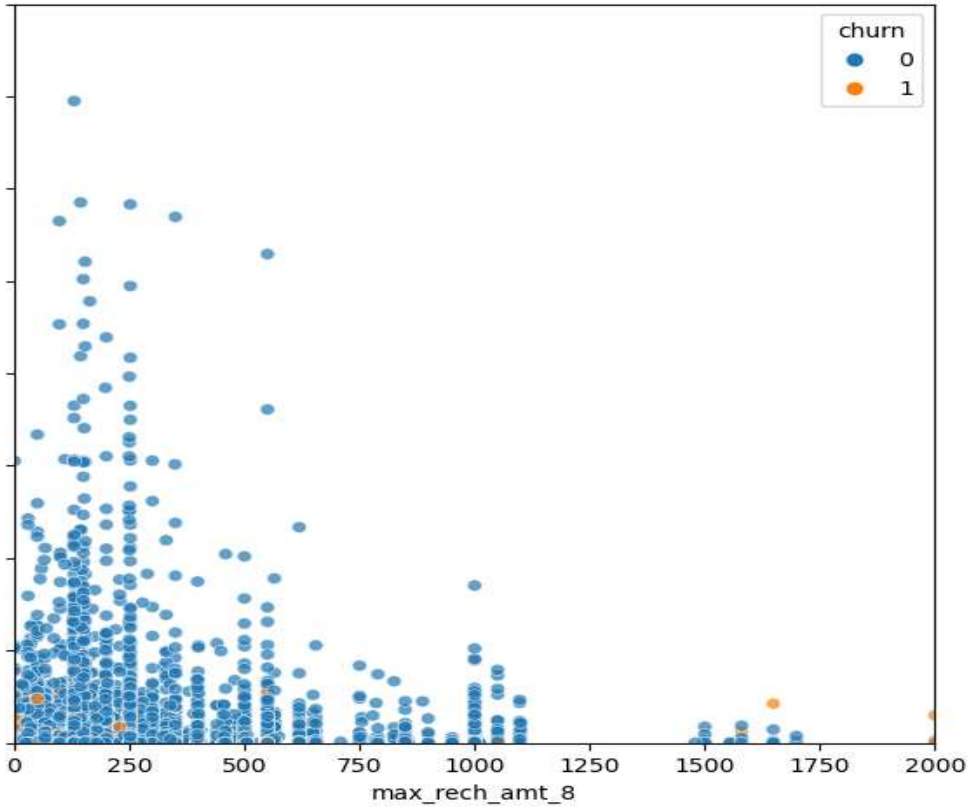


Users who recharged with higher amounts tended to use the service for local purposes less frequently than those who recharged with lower amounts. Surprisingly, even during the good phase, users with very low maximum recharge amounts and local outgoing usage churned more.



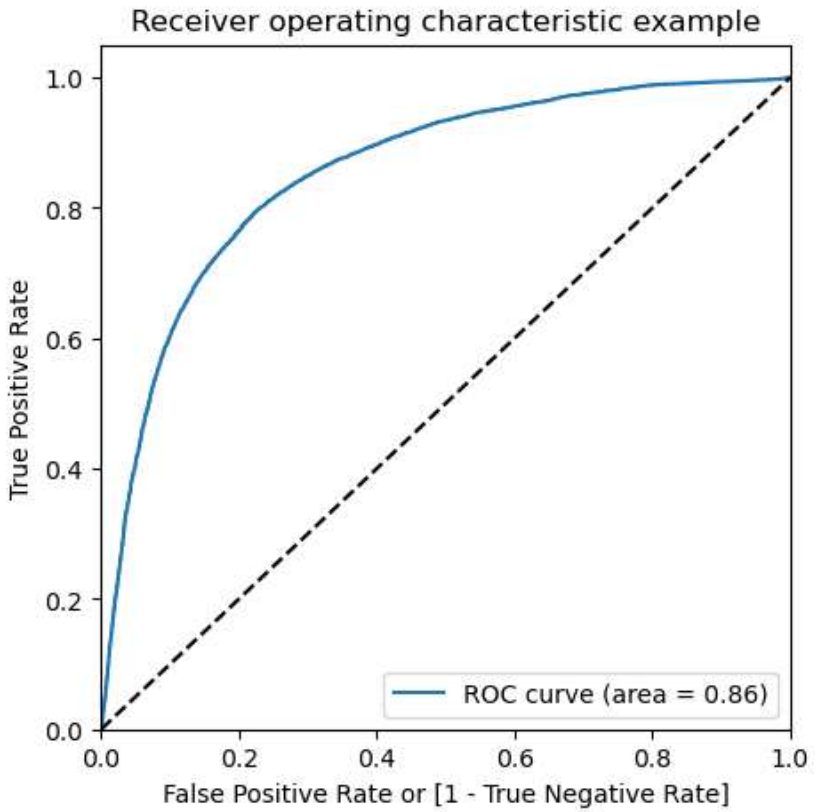
We can see that users who had the max recharge amount of less than 200 churned more





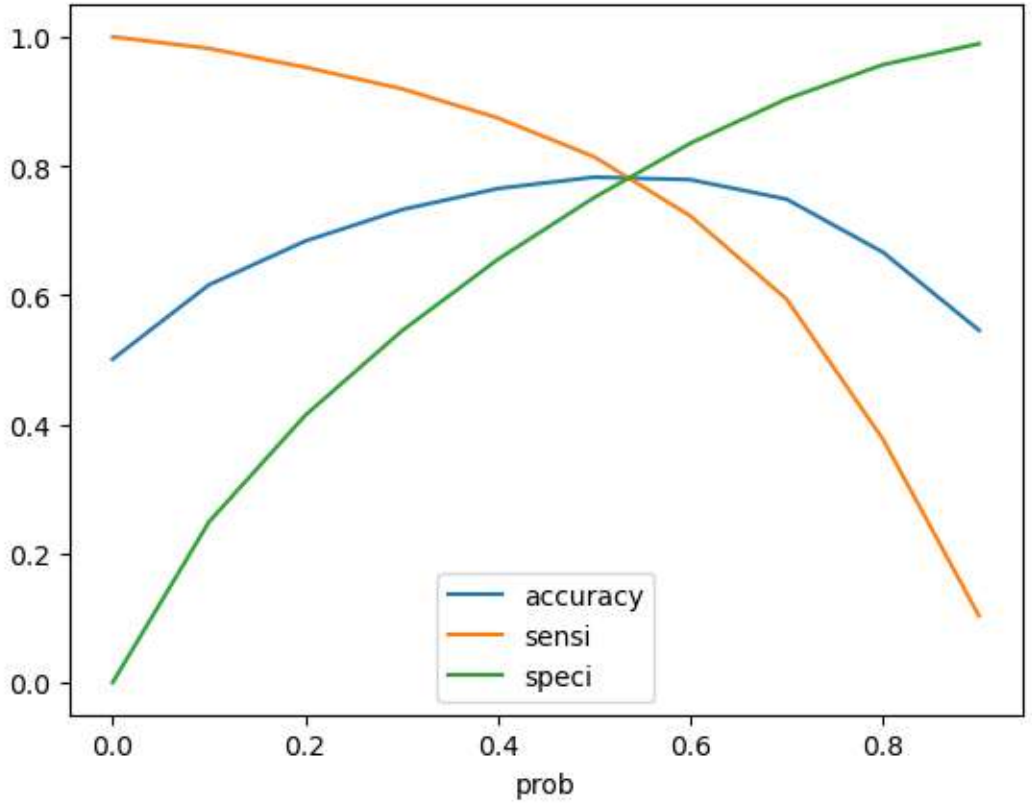
Users who have a high maximum recharge amount but still have low incoming call minutes during the favorable phase churned out more.

ROC CURVE



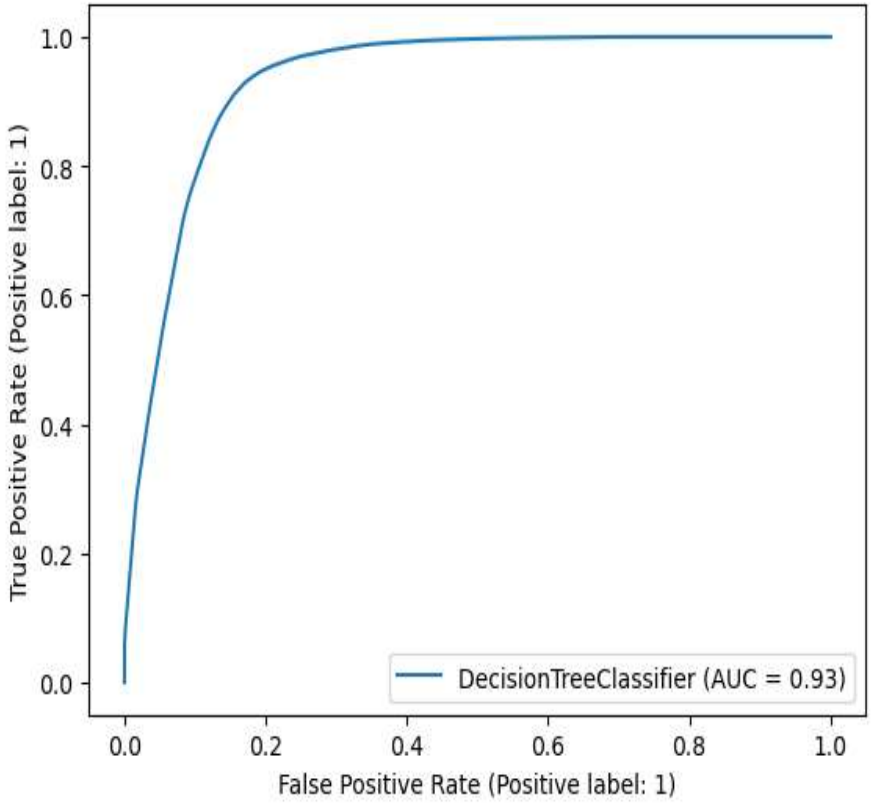
The ROC curve showcases an outstanding area under the curve of 0.86, undeniably demonstrating its exceptional performance.

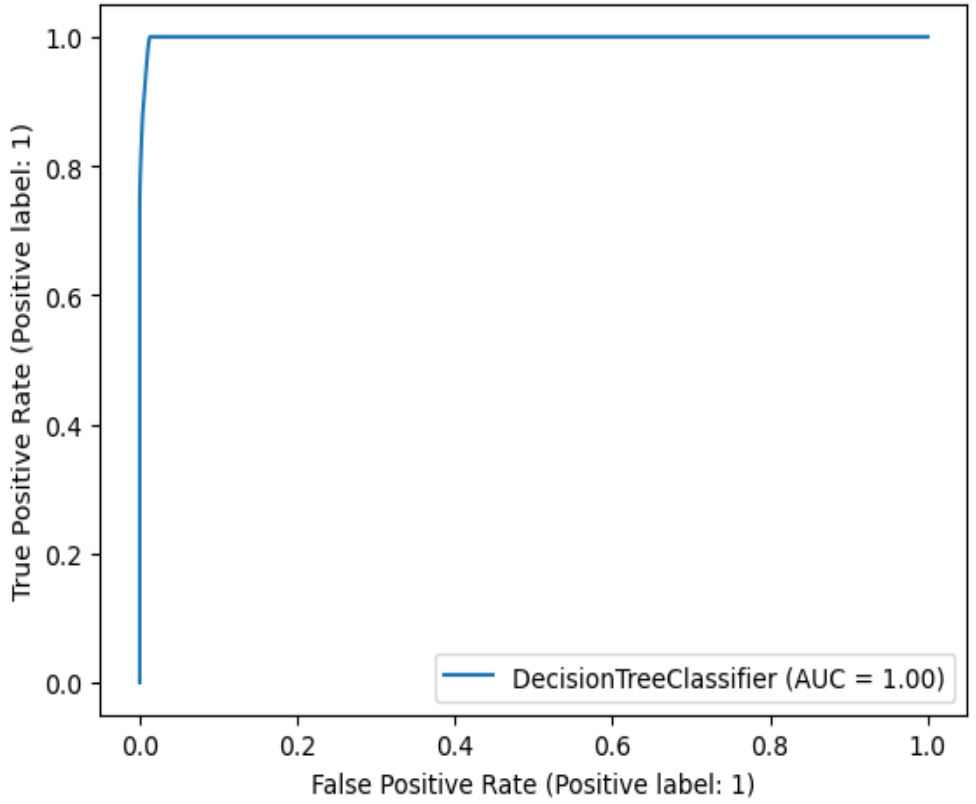
OPTIMAL VALUE FOR METRICS



Based on the data, it's clear that the most effective values for the three metrics center around 0.5 Therefore, let's confidently select 0.5 as our cutoff point moving forward.

ROC FOR DECISION TREE





We are getting an accuracy of 90% on train and test data, with decision tree

CONCLUSION

Most of the top predictors are from the action phase, as the drop in engagement is prominent in that phase.-

Some of the factors we noticed while performing EDA, which can be combined with these insights, are:

1. Users whose maximum recharge amount is less than 200 even in the good phase should be tagged and re-evaluated from time to time as they are more likely to churn.
2. 2. Users that have been with the network for less than 4 years should be monitored from time to time, as data shows that users who have been associated with the network for less than 4 years tend to churn more.
3. 3 MOU is one of the major factors, but data, especially VBC, if the user is not using a data pack, is another factor to look out for.