# DOMAIN ORIENTED CASE STUDY

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## THE STRONGEST INDICATORS OF CHURN :

1. CUSTOMERS WHO CHURN SHOW LOWER AVERAGE MONTHLY LOCAL INCOMING CALLS FROM FIXED LINE IN THE ACTION PERIOD BY 1.27 STANDARD DEVIATIONS , COMPARED TO USERS WHO DON'T CHURN , WHEN ALL OTHER FACTORS ARE HELD CONSTANT. THIS IS THE STRONGEST INDICATOR OF CHURN.

2. CUSTOMERS WHO CHURN SHOW LOWER NUMBER OF RECHARGES DONE IN ACTION PERIOD BY 1.20 STANDARD DEVIATIONS, WHEN ALL OTHER FACTORS ARE HELD CONSTANT. THIS IS THE SECOND STRONGEST INDICATOR OF CHURN.

3. FURTHER CUSTOMERS WHO CHURN HAVE DONE 0.6 STANDARD DEVIATIONS HIGHER RECHARGE THAN NON-CHURN CUSTOMERS. THIS FACTOR WHEN COUPLED WITH ABOVE FACTORS IS A GOOD INDICATOR OF CHURN.

4. CUSTOMERS WHO CHURN ARE MORE LIKELY TO BE USERS OF 'MONTHLY 2G PACKAGE-0 / MONTHLY 3G PACKAGE-0' IN ACTION PERIOD (APPROXIMATELY 0.3 STD DEVIATIONS HIGHER THAN OTHER PACKAGES), WHEN ALL OTHER FACTORS ARE HELD CONSTANT.

**INDICATORS THE RECOMMENDATIONS TO THE TELECOM COMPANY ARE :**

1. CONCENTRATE ON USERS WITH 1.27 STD DEVIATIONS LOWER THAN AVERAGE INCOMING CALLS FROM FIXED LINE. THEY ARE MOST LIKELY TO CHURN.

2. CONCENTRATE ON USERS WHO RECHARGE LESS NUMBER OF TIMES ( LESS THAN 1.2 STD DEVIATIONS COMPARED TO AVG) IN THE 8TH MONTH. THEY ARE SECOND MOST LIKELY TO CHURN.

3. MODELS WITH HIGH SENSITIVITY ARE THE BEST FOR PREDICTING CHURN. USE THE PCA + LOGISTIC REGRESSION MODEL TO PREDICT CHURN. IT HAS AN ROC SCORE OF 0.87, TEST SENSITIVITY OF 100%.

## Analyze the features across 6th, 7th and 8th month
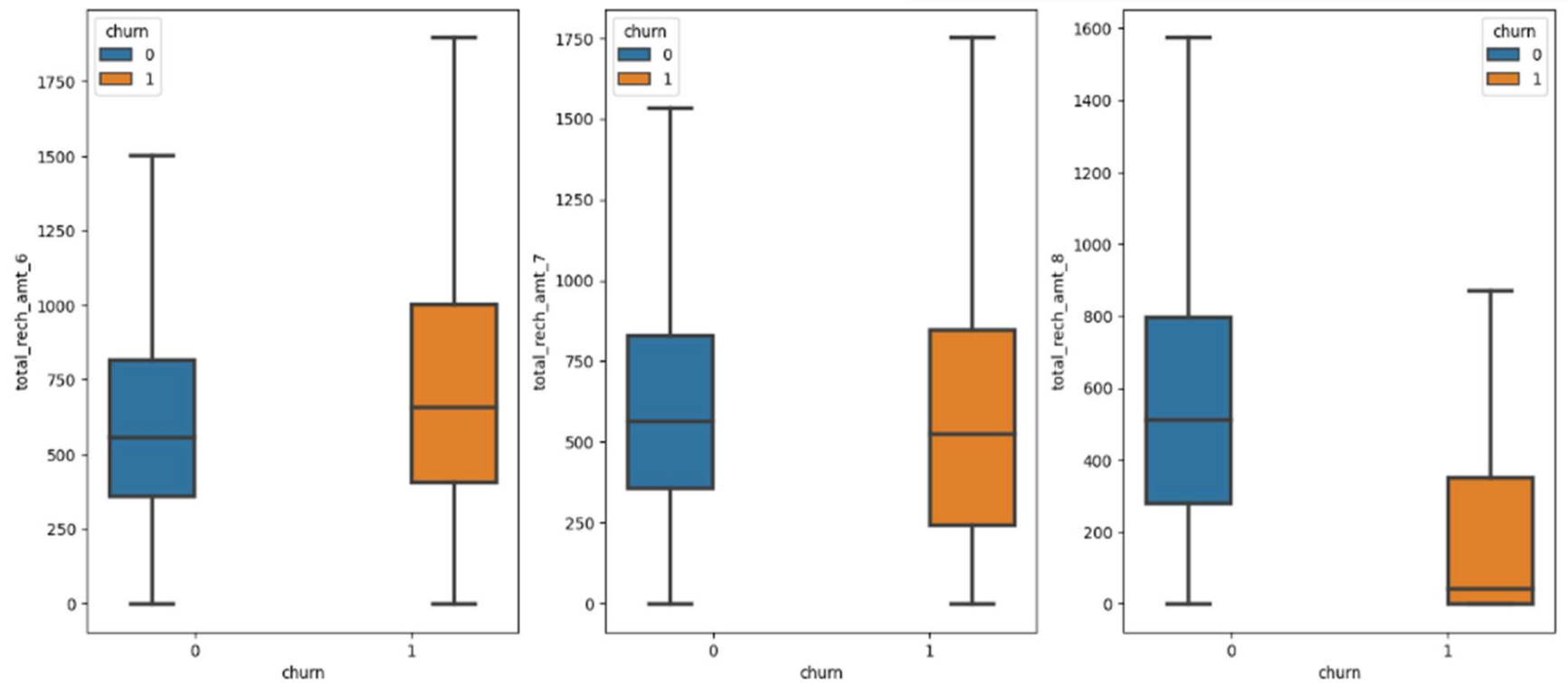
# Analyze total recharge amount for data:
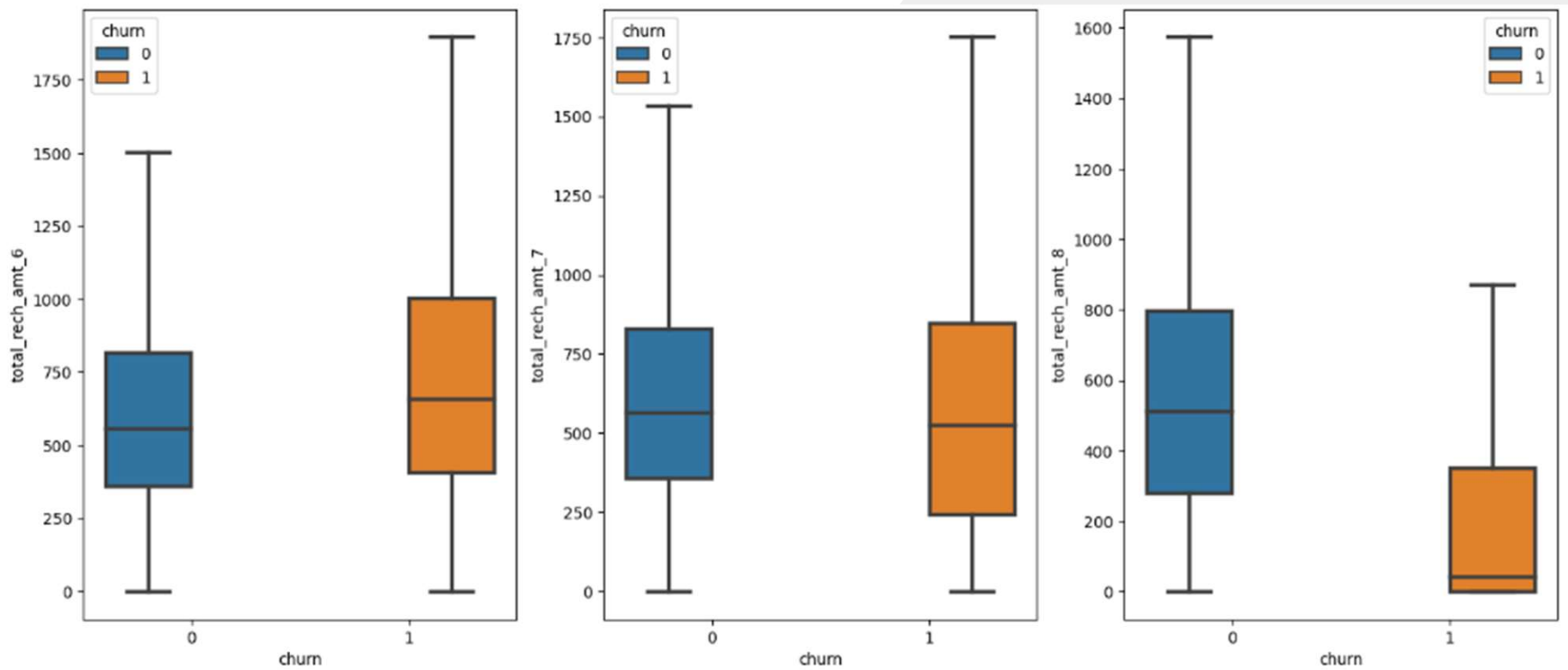
## MAIN INDICATOR OF CHURN :

From the code it is clear that the factors affecting the churn are total_ic_mou_8 (Total incoming call: Minutes of usage in the action phase), total_rech_amt_diff (Total recharge amount difference), total_og_mou_8 (Total outgoing call: Minutes of usage in the action phase), arpu (Average revenue per user), roam_ic_mou_8 (Roaming incoming call: Minutes of usage in the action phase), roam_og_mou_8 (Roaming outgoing call: Minutes of usage in the action phase), std_ic_mou_8(STD incoming call: Minutes of usage in the action phase), std_og_mou_8 (STD outgoing call: Minutes of usage in the action phase), av_rech_amt_data_8(average recharge amount in the action phase).

# STEPS TO HELP REDUCE CHURN

- Give special; discounts to customers according to their usage

- Provide additional internet services on recharge.

- Speak to customers to fulfil their desires.

- Lower tariffs on data usage,a better 2G area coverage where 3G is not available.

- Expansion of 3G network where 3G is currently not available.

Thank You!