Telecom Churn Case Study

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Problem Statement

- In the highly competitive telecom industry, with an annual churn rate of 15-25%, retaining customers is more cost-effective than acquiring new ones.

Business Goal

- Retaining high profitable customers
- Necessity to predict which customers are at high risk of churn
- Identify customers at high risk of churn
- Identify the main indicators of churn

Observations :

1. Target the customers, whose minutes of usage of the incoming local calls and outgoing ISD calls are less in the action phase (mostly in the month of August).
2. Target the customers, whose outgoing others charge in July and incoming others on August are less.
3. Also, the customers having value-based cost in the action phase increased are more likely to churn than the other customers. Hence, these customers may be a good target to provide offer.
4. Customer's, who's monthly 3G recharge in August is more, are likely to be churned.
5. Customers having decreasing STD incoming minutes of usage for operators T to fixed lines of T for the month of August are more likely to churn.
6. Customer's decreasing monthly 2g usage for August are most probable to churn.
7. Customers having decreasing incoming minutes of usage for operators T to fixed lines of T for August are more likely to churn.
8. roam_og_mou_8 variables have positive coefficients (0.7135). That means for the customers, whose roaming outgoing minutes of usage is increasing are more likely to churn.

Customer Churn Parameters:

- Less incoming and out going usage during action phase
- Increased in value based cost during action phase
- 3G recharge in August
- Decrease in STD calls
- Decreased 2G usage
- Increase in roaming outgoing usage

Model Accuracy

- Train set
  - Accuracy = 0.84
  - Sensitivity = 0.81
  - Specificity = 0.83
- Test set
  - Accuracy = 0.78
  - Sensitivity = 0.82
  - Specificity = 0.78
- Due to good Sensitivity and Accuracy we can say that model is relevant in explaining the business based on analysed data.