Telecom Churn Case Study

Summary

Recommendations

Business Implications

Submitted By:
Shubham Sharma

Telecom Churn Case Study - Summary

1. The data contains so many columns. Majorly the columns are based on a four-month window which we have to study and analyze using a good phase(June and July), an Action phase(August), and a Churn phase(September).

2. We derived some new features to study the change in the values of recharge and to derive features that can be indicators of churn.

3. We filter high-value customers so that from the business point of view, we can focus more on them.

4. We have made a new column by tagging churners based on the churn phase. Tagging churners majorly based on incoming calls, outgoing calls, 2g data, and 3d data usage of September month.

5. There is a data imbalance, so we have used SMOTE to deal with imbalanced data.

6. We have chosen a model based on best evaluation metrics.

Telecom Churn Case Study - Recommendations

We have to majorly focus on the action phase.

1. Target those customers who are having fewer minutes of usage than the good phase.

2. Customers who have minutes of usage and 2g/3g data in the action phase less than that of the good phase, are likely to be churned.

3. Focus on the high-value customers, giving them more benefits from the company.

4. Customers with decreasing incoming minutes of usage in the action phase are more likely to churn.

Telecom Churn Case Study – Business Implications

1. logistic Regression with no PCA.

We are focussing on the below top predictors in the model **logistic Regression with no PCA.**

Some variables are directly related and some are inversely related to the churn column.

We have to focus on these features accordingly.

	coef
const	-7.6743
arpu_6	0.3403
arpu_7	0.5905
arpu_8	-1.6226
onnet_mou_8	0.0272
roam_og_mou_8	0.1618
loc_og_mou_8	-0.3077
std_og_t2t_mou_8	-0.0207
std_og_t2m_mou_8	0.0629
loc_ic_mou_7	1.0179
loc_ic_mou_8	-2.3103
spl_ic_mou_8	-0.8444
aon	-0.6384
sep_vbc_3g	-60.3358

Telecom Churn Case Study – Business Implications

2. Decision Tree with PCA.

Metrics for train data.

```
Accuracy:- 0.8514700360775095
Sensitivity:- 0.8731247041154481
Specificity:- 0.829815368039571
```

Metrics for test data.

```
Accuracy:- 0.8140810059950285
Sensitivity:- 0.626126126126262
Specificity:- 0.8220300236226472
```