Telecom Churn Project Analysis

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Summary

- Telecom industry is ever changing with new technology and new entrants in the market. In such scenarios the customers have varied choice to go to any service provider, avail the service of more than 2 service provide at the same time.
- The customers can also switch from one operator to the another at any time. The average customer turnover varies between 15% to 25%.
- Retaining the existing customer is critical in comparison to the cost of acquiring new customer which is 5 to 10 time higher than the retention cost.

Summary continued…..

- Identification of high net worth and high profitable customers is critical and strategy to retain them.
- Prediction of high customer turnover would help to address the needs as preemptive action.
- The project is of a leading telecom company which requires to analyse the customer level data.
- The objective is to design a predictive model which would help to predict the high churn customers.
- Understanding dataset and business objectives is needed for proper analysis. This will help in studying the patterns and indicators to predict the reasons for churn and take action to retain.

Recommendations

- Focus on such customers which has standard deviations of 1.27 that is lesser than the average incoming calls from the fixed lines, since they are highly likely to churn.
- Focus on such users which represent the second highest churn rate, those who do not go for regular recharge, which is lesser than standard deviation of 1.27 as compared to the average in the 8^{th} month.
- Focus on those predictive models which would give optimal churn rate. It is recommended to go for PCA + Logistic Regression model, with an ROC score of 0.87 and a test sensitivity of 100%, for better accuracy of predictions.

Recommendations continued….

- Important features:
  - ✓ roam_og_mou_8
  - ✓ roam_ic_mou_8
  - ✓ arpu_8
  - ✓ max_rech_amt_8
  - ✓ total_og_mou_8
  - ✓ last_day_rch_amt_8
  - ✓ av_rech_amt_data_8

Business Interpretation

- The project analysis helps to identify the important indicators for customer churn in the telecom industry.
- During the action period, those customers who gradually churn out shows lesser average local monthly incoming calls as compared to the fixed line calls. This reflects a substantial deviation on 1.27 while other factors are constant.
- During the action period lower rate of recharges are identified with standard deviation of 1.20 which is the next highest churn indicator.
- The customers with standard deviation is 0.6 which is higher recharge than the non churn customers, also ad don to the churn rate.

Business Interpretation continued….

- The action phase features can be found in the derived phase features.
- The Random Forest Model has depicted higher performance with 90.05% of accuracy rate.
- Such accuracy depicts the model’s effectiveness in making prediction.