



TELECOM CHURN CASE STUDY

Presentation by :

1. Tejas Guptha
2. Veda Pedditti

Outline of the presentation

01. Problem Statement &
Objectives

02. Methodology

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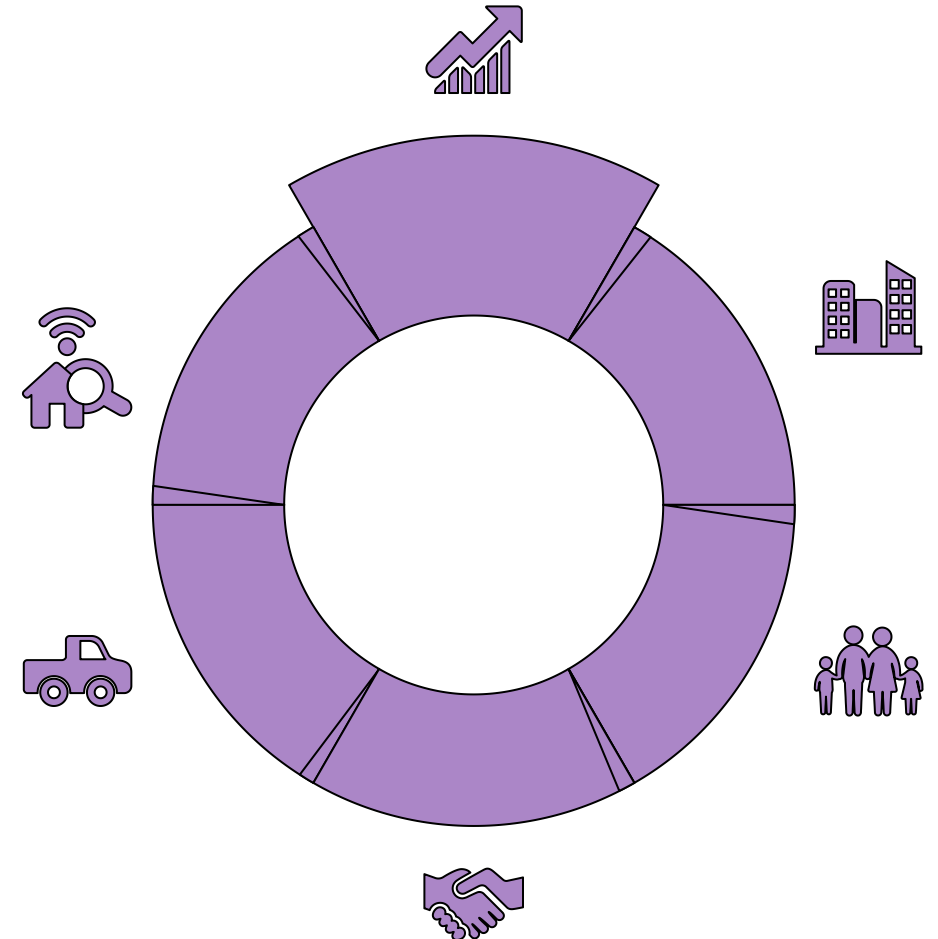
05. Model Building Approaches

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Recommendations

01

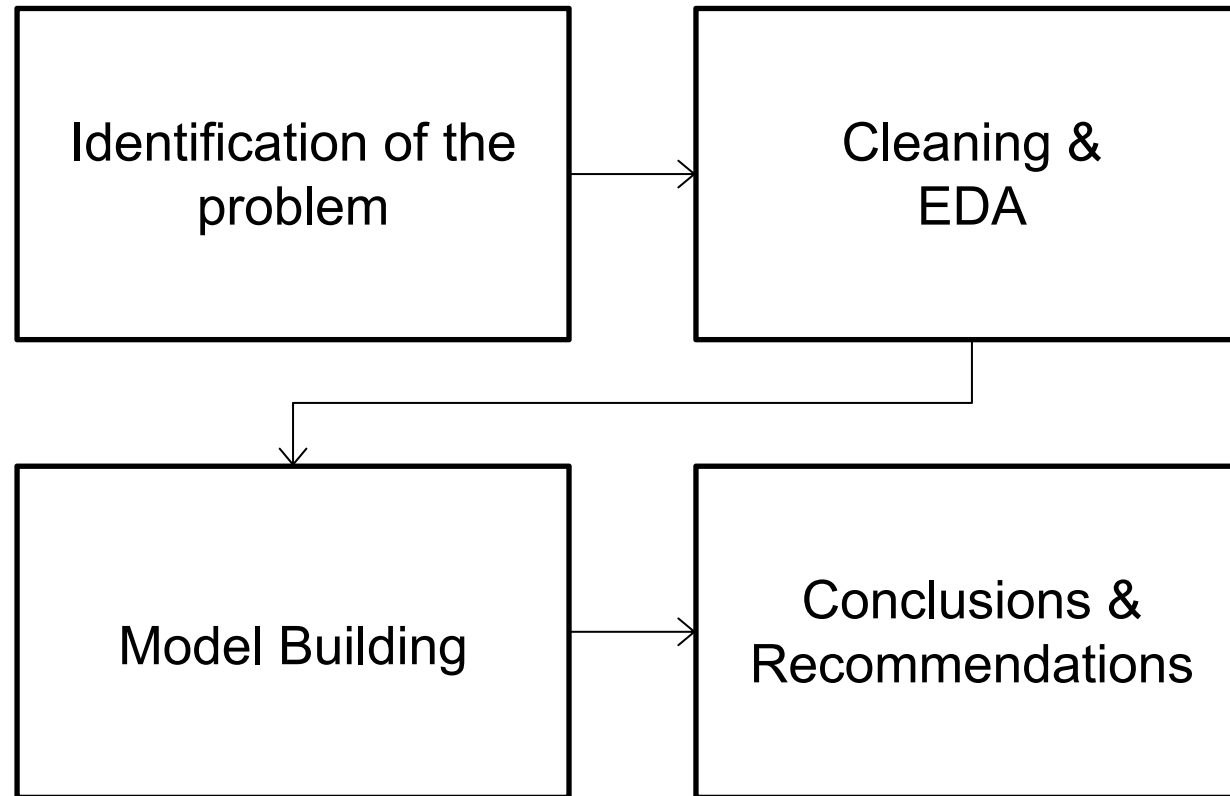
Problem Statement & Objectives

- 01 To predict customers that are at high risk of churn in telecom service provider's database.
- 02 To predict the churn in last month using the data from first three months.
- 03 Applying the concept of EDA to carry out the analysis.
- 04 To develop a robust machine learning model
- 05 To provide valuable suggestions to the company for better business



02

Methodology



03

Assumptions made in the study



The data provided by the company is genuine and free from errors.



A column/feature with more than 40% nulls are dropped.



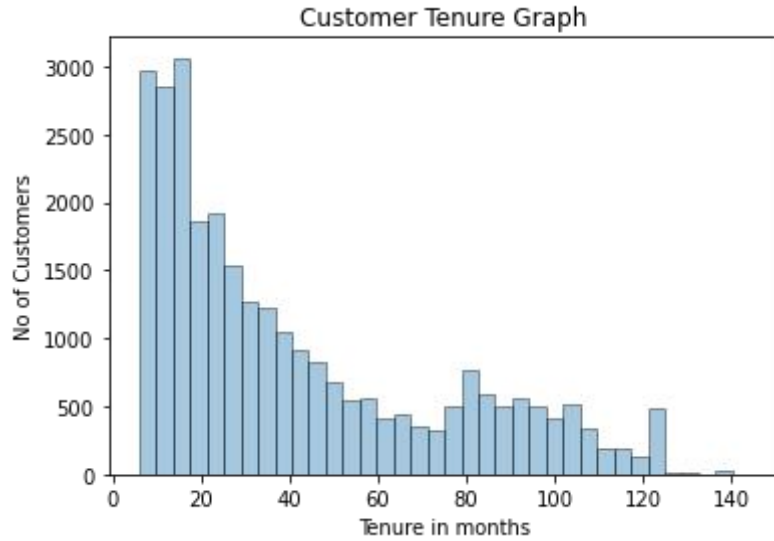
First 2 months are being considered as good phase, 3rd month as action phase and 4th month as churn phase



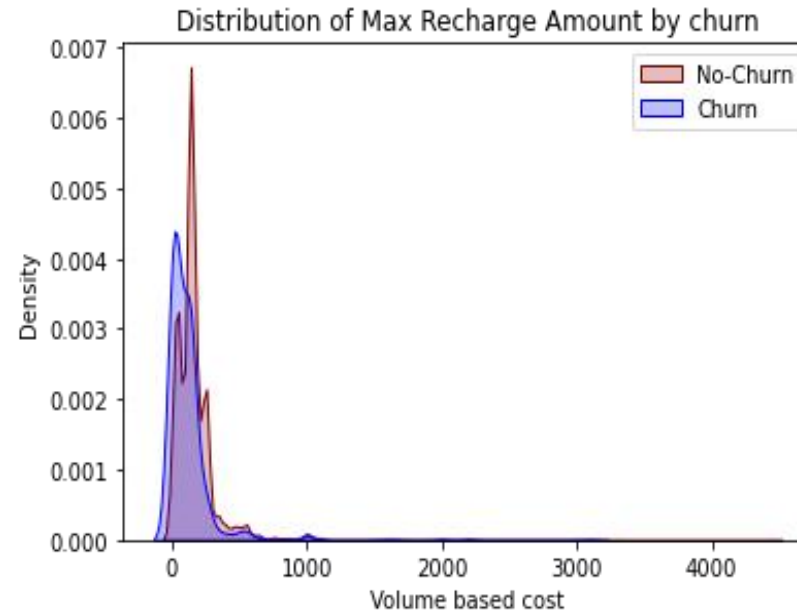
Major insights are included in the presentation. IPYNB file may be referred for detailed analysis

04

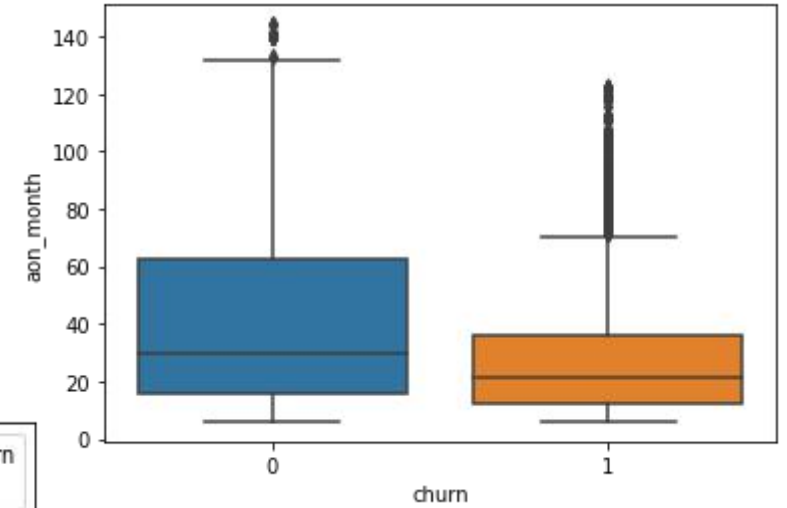
EDA



Customers having a tenure of less than 4 years are more likely to churn



The plot clearly indicates the fact that the non-churners are willing to pay subscriptions that cost high.



Tenured customers are not churning and are readily availing the services

05

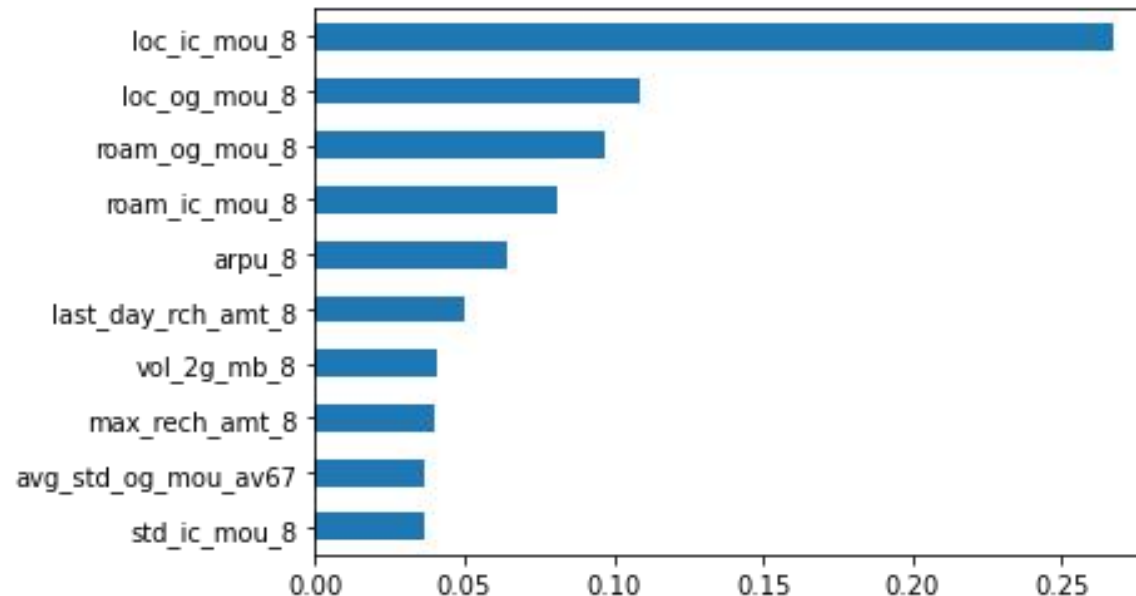
Model Building Approaches

- | | |
|---------------------------------|------------------------------|
| 1. Principal Component Analysis | - Accuracy recorded : 80.39% |
| 2. Decision Tree Analysis | - Accuracy recorded : 86.70% |
| 3. Random Forest | - Accuracy recorded : 95.21% |

06

Conclusions & Recommendations

- loc_ic_mou_8, loc_og_mou_8 & roam_og_mou_8 have been revealed as the top predictor variables to predict churn.
- Tenured customers are not churning and are readily availing the services
- Customers with a tenure of less than 4 years are more likely to churn
- Random Forest approach produced the best results with an accuracy of 95.21%



Thank You