



Case Study Telecom Churn

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Agenda

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About Business

Industry Understanding

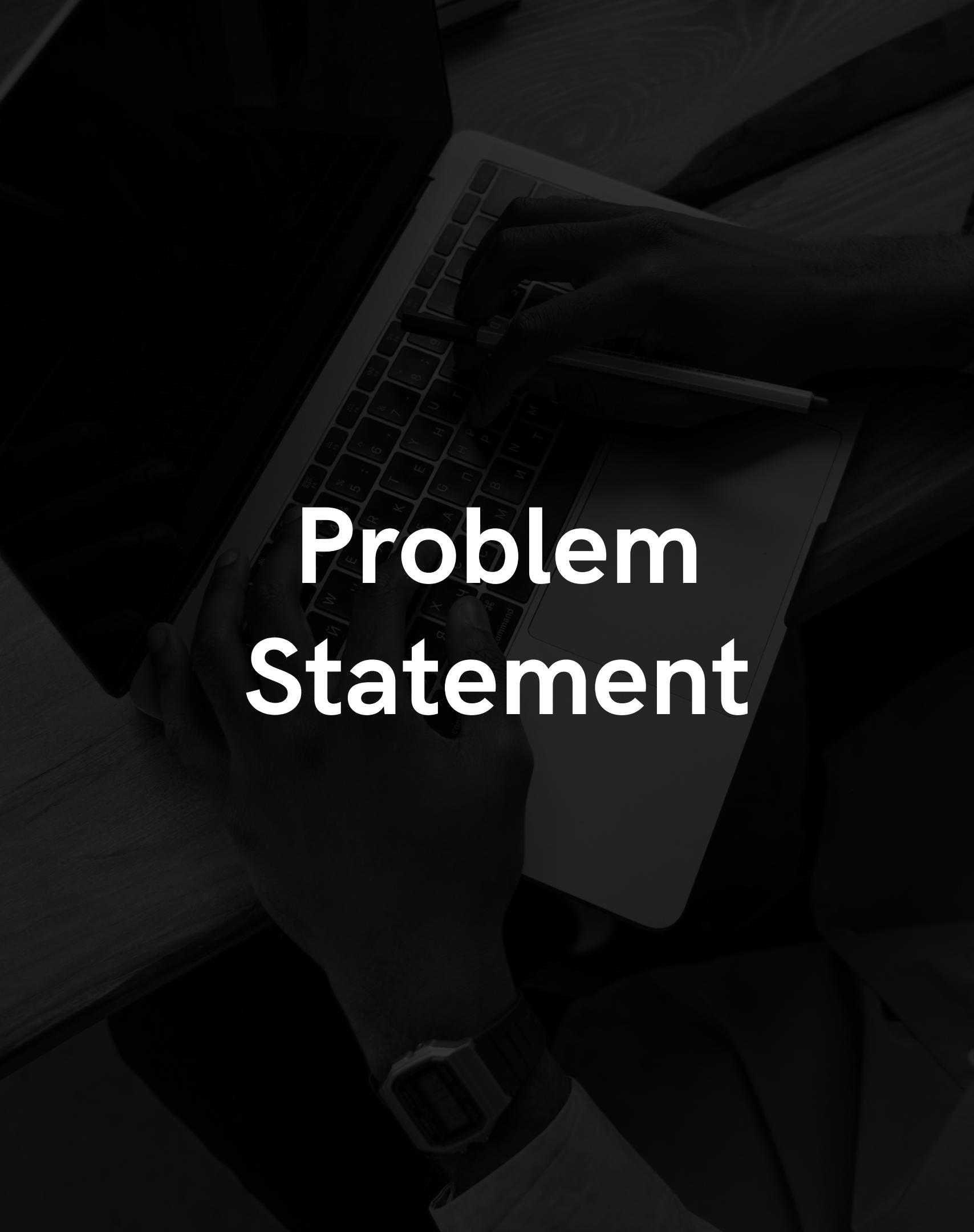
- There are 2 types of payment models in the industry
 - Postpaid model, where customer pays after using service
 - Prepaid model, where customer pays in advance to use the services
- Detection of customer churn is difficult in prepaid model than in postpaid model

What is Business Goal

Business goal of operators is to retain highly profitable customers

Why to retain customers

- Telecommunications industry experiences an average of 15-25% annual churn rate
- It costs 5-10x more to acquire a new customer than to retain an existing one, customer retention has now become even more important than customer acquisition



Problem Statement

Components of Problem Statement

- Build predictive models to identify customers at high risk of churn
- Identify the main indicators of churn

Focus of Study

- The focus of study is based on high value customers, who are top 20% in payments which contribute 80% of revenue
- Focus is on markets of India and Southeast Asia

Business Objective

Predict the churn in the last month using the data (features) from the first three months

Goals of Case Study



Predict whether customer will churn or not

predict whether a high-value customer will churn or not, in near future



Identify important variables for predicting churn

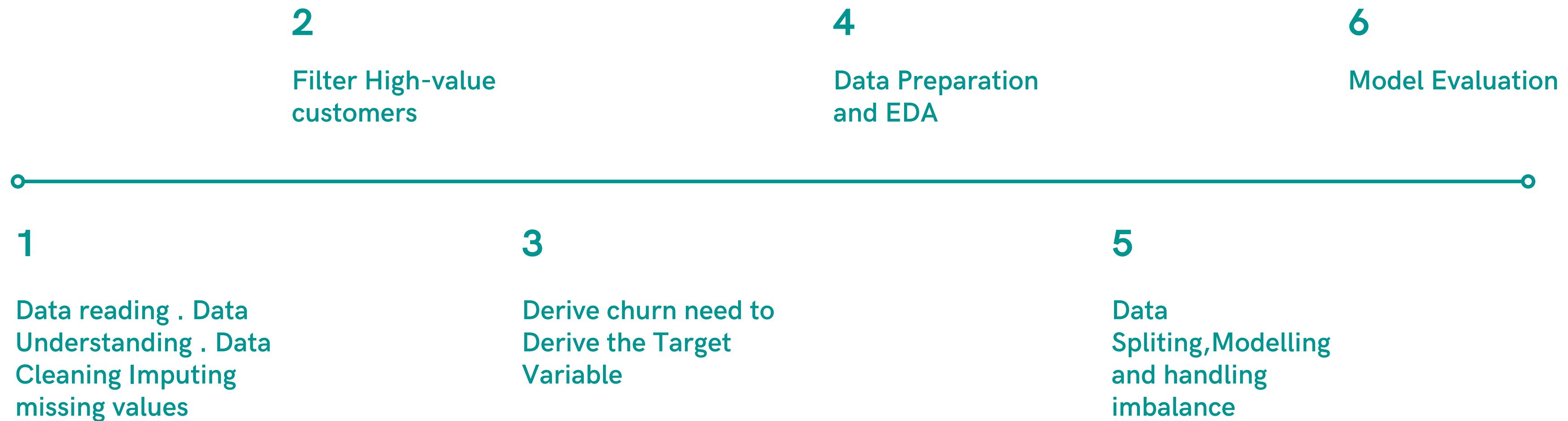
Identify variables that are strong predictors of churn to understand factors that highly influence churn behaviour



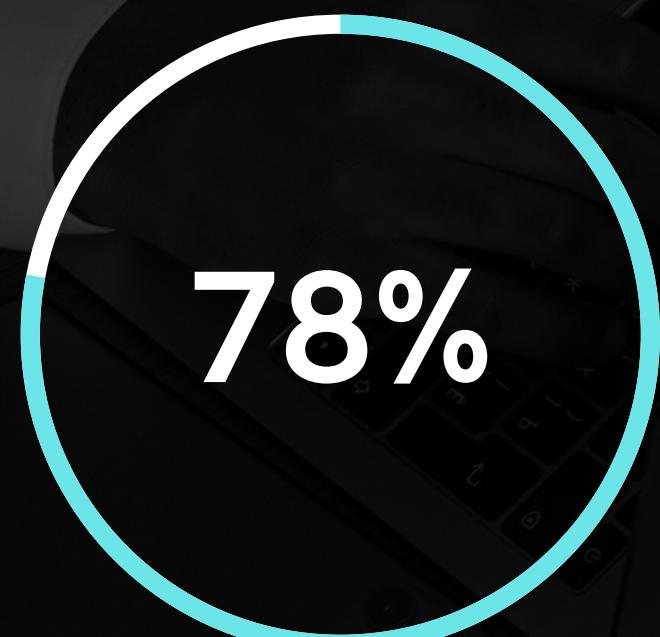
Modelling

Build 2 models to identify important variables and find predictors of the churn

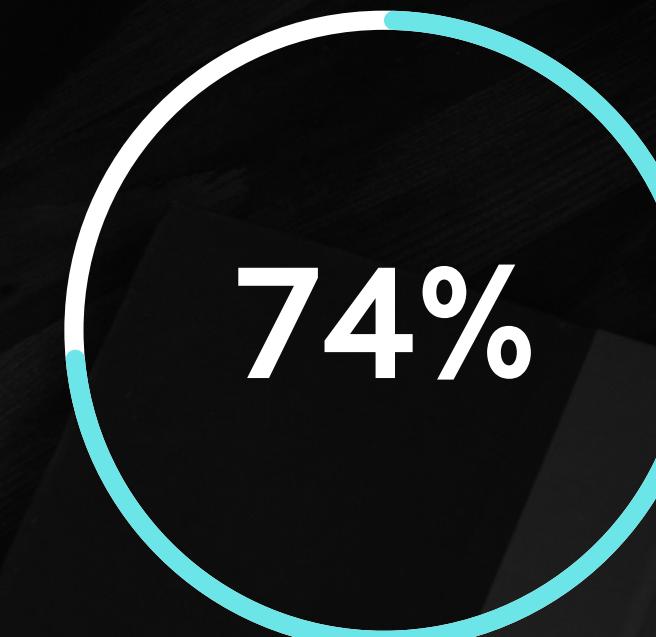
Model Building Steps



Model Results - Logistic Regression



Model-1
Accuracy

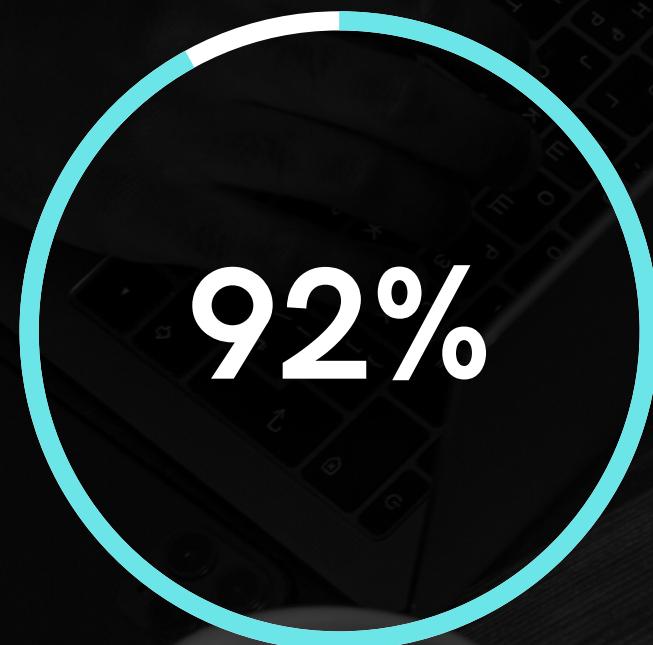


Model-2
Accuracy

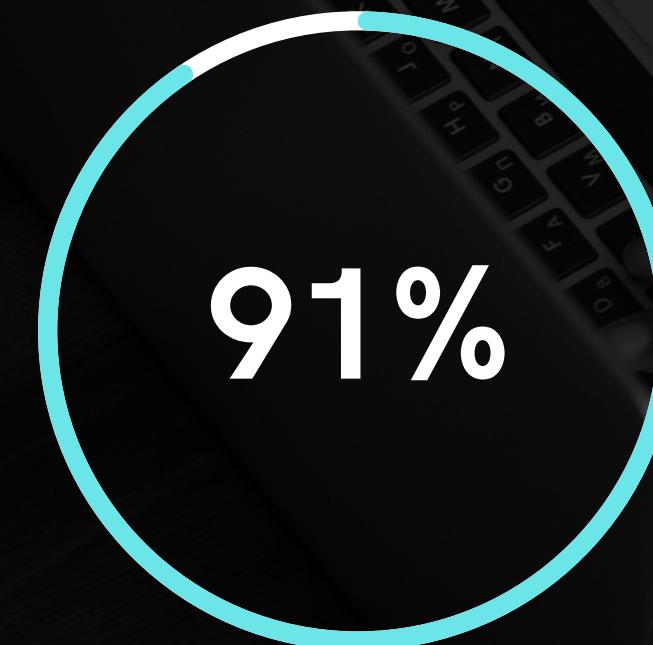


Model-3
Accuracy

Model Results - Random Forest



Model
Accuracy w/o
hypertuning



Model
Accuracy with
hypertuning

Conclusion



Best Model

Random Forest due to higher accuracy

Important Factor

Incoming calls play important role in determining churn

Recommendation

Focus on incoming calls and provide offers to customers with lowering incoming calls