

The background is a deep blue gradient with a subtle pattern of white dots, resembling a starry sky. Overlaid on this are several white geometric elements: concentric circles of varying sizes, some with dashed outlines, and a large circular scale with tick marks and numbers ranging from 140 to 260. Arrows indicate a clockwise direction of movement for these elements.

TELECOM CUSTOMER ATTRITION

JULY 16TH, 2020

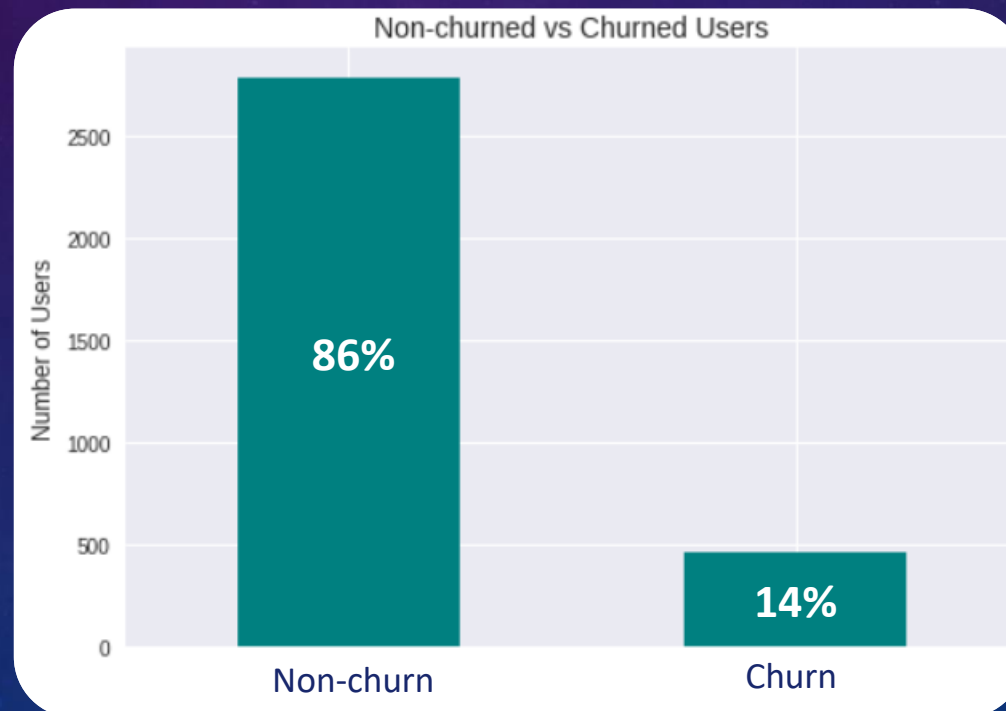
PRESENTED BY LINH MAI

OBJECTIVES

- ★ SyriaTel needs to make the correct strategic decisions
- ★ Improve customer retention rate by 5%
→ Increase the profit by 25%-95%
- ★ Customer attrition analysis helps tracking the balance between revenues from new and existing customers

OVERVIEW

- ★ **Raw data:** more than 3,300 entries with 20 features
- ★ **Cleaned data:** About 3,200 entries with 19 features:
 - Eliminated: area code, phone number
 - Added: '*total charge*': total day/eve/night/international charges



RECOMMENDATIONS

International Plan

Whether a customer has a plan for calling internationally

Total Charge

Total amount a customer has to pay per month

Customer Service Calls

How many times a customer call Customer Service department per month

Voicemail Plan

Whether a customer has a voicemail feature

Total International Calls

Total amount of international calls per month

Total Day Minutes

Total call minutes that a customer makes during the day each month

TOP 3 MODELS' PERFORMANCE

XGBoost

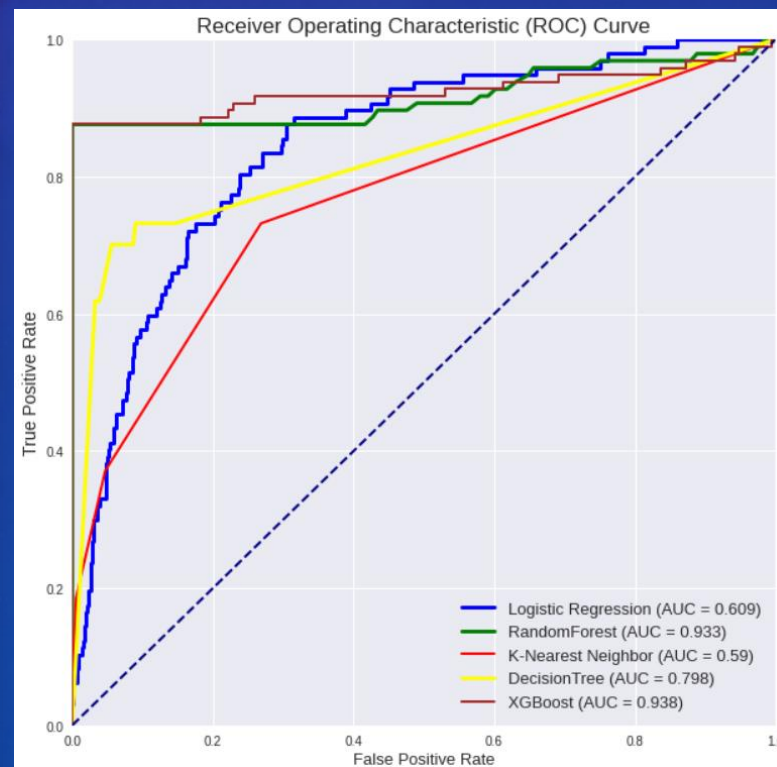
93%

Random Forest

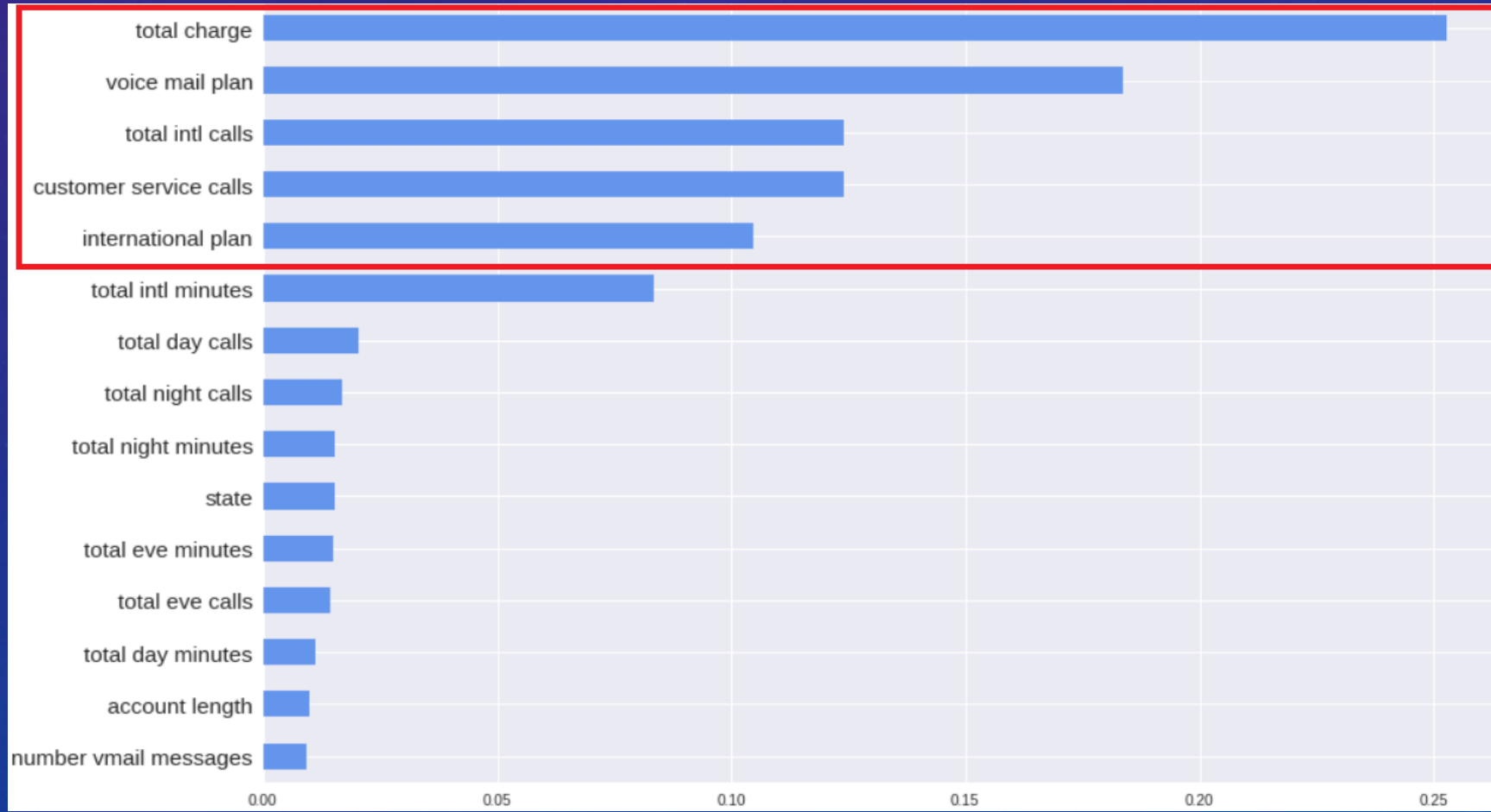
93%

Decision Tree

68%



TOP FEATURES FROM XGBOOST MODEL



FUTURE CONSIDERATIONS



More data points



In-depth research on each of top features



Other types of classification models
(Deep Learning models: Boltzmann Machines, etc.)



THANK YOU