

The background is a dark blue gradient with a subtle pattern of white dots. Overlaid on the left side are several concentric circles and a large arc with a scale. The scale has markings from 140 to 260 in increments of 10. There are also several smaller circles, some with arrows indicating a clockwise direction. The overall aesthetic is technical and futuristic.

TELECOM CUSTOMER ATTRITION

JULY 16TH, 2020

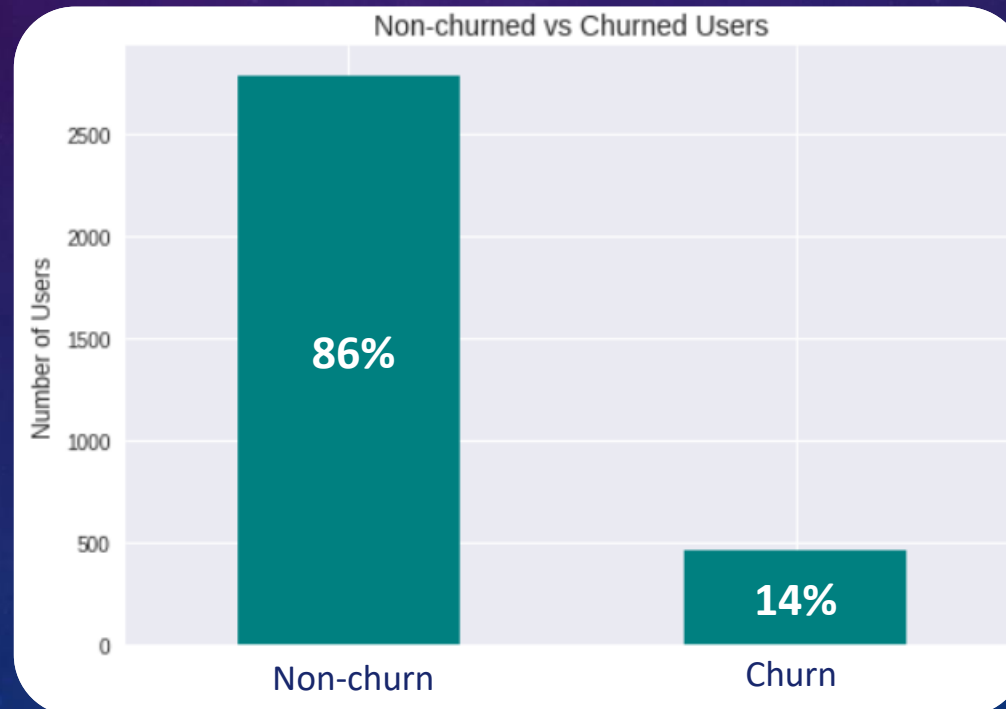
PRESENTED BY LINH MAI

OBJECTIVES

- ★ SyriaTel needs to make the correct strategic decisions
- ★ Improve customer retention rate by 5%
→ Increase the profit by 25%-95%
- ★ Acquiring new customers is more expensive than retaining 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



TOP 3 MODELS' PERFORMANCE

F1 SCORE

XGBoost

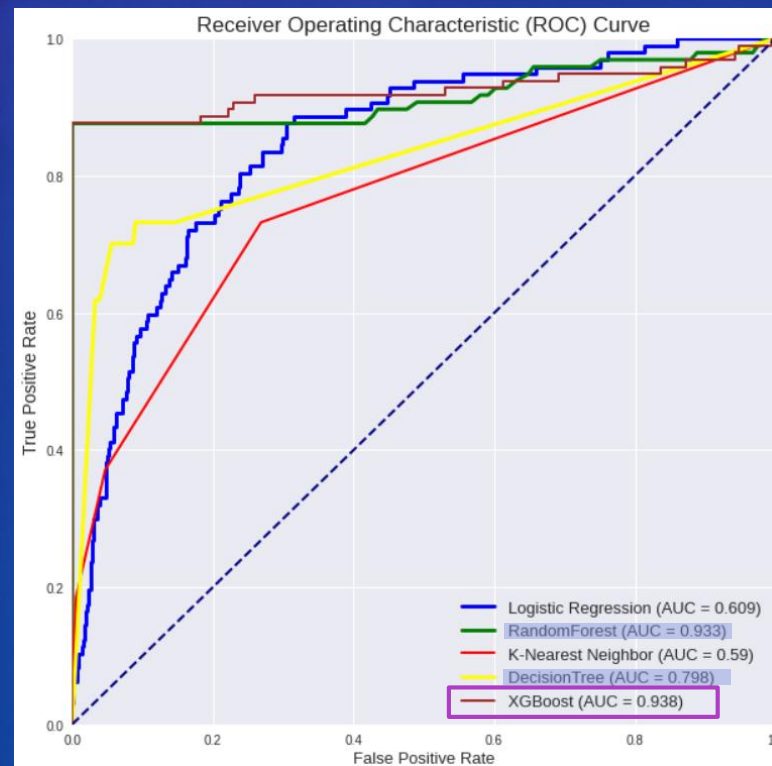
93%

Random Forest

93%

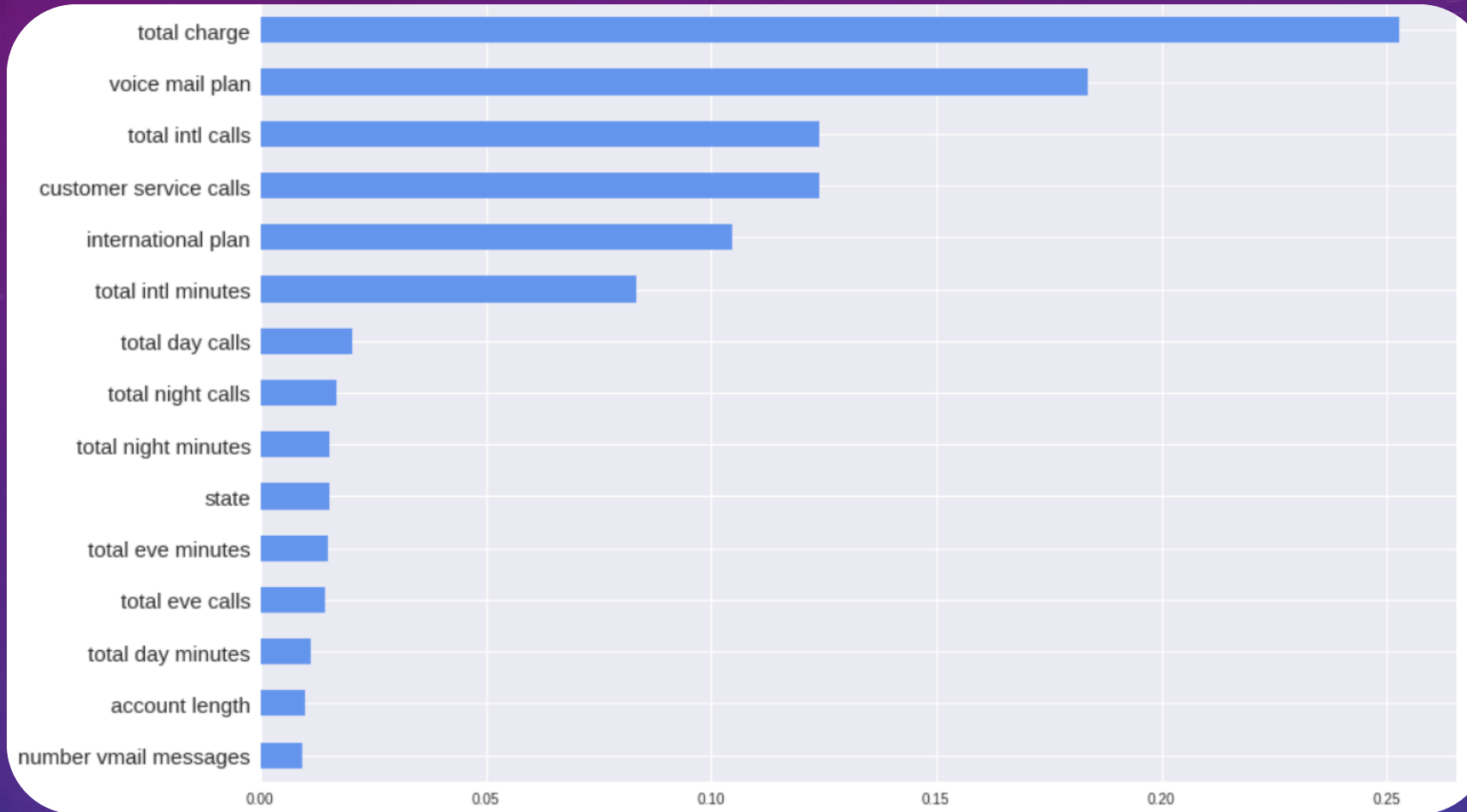
Decision Tree

68%



**Much better than randomly guessing
with 50% of correct results**

TOP FEATURES FROM XGBOOST MODEL



RECOMMENDATIONS

Total Charge

Total amount a customer has to pay per month

1

4

International Plan

Whether a customer has a plan for calling internationally

Voicemail Plan

Whether a customer has a voicemail feature

2

5

Customer Service Calls

How many times a customer call Customer Service per month

Total International Calls

Total number of international calls per month

3

6

Total International Minutes

Total amount of minutes that a customer calls internationally

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