Syria Tel

Customer Churn Predictive Models

Jhonathan David H. Shaikh, MBA

01

Problem

Business and Problem Understanding

02

Solve

Recommendations (1 data base Analysis & Models)

03

Next Steps

Business and Data Solutions

01

Business & Problem Understanding

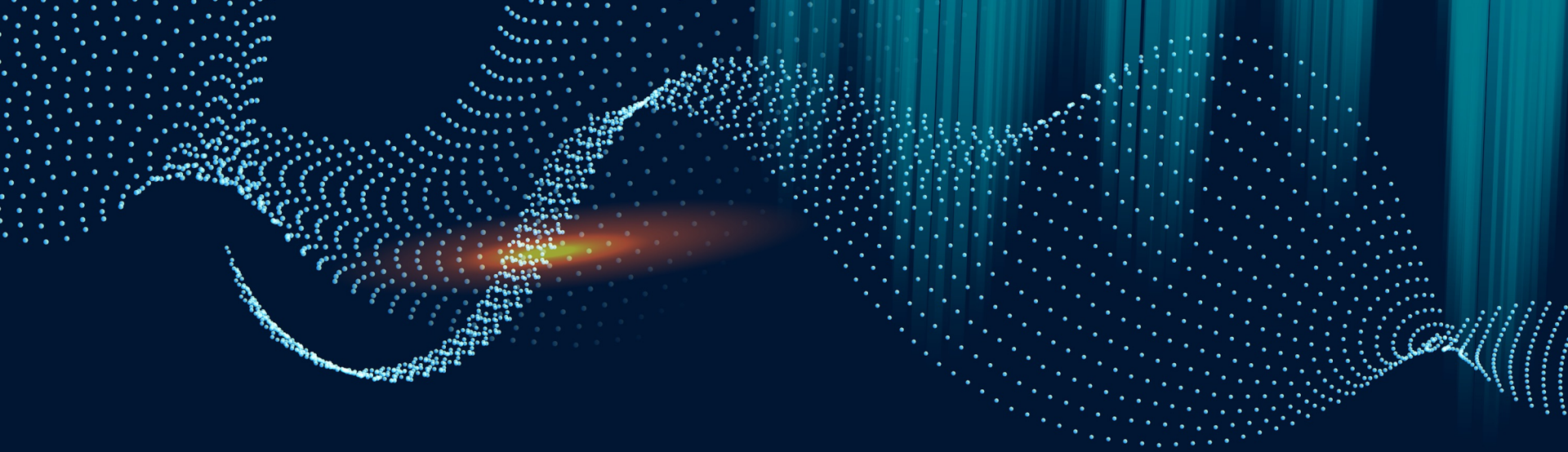
Syria Tel

Syria Tel in a nutshell

- Syrian Telecom provider
- Founded in 2000
- One of only two providers

Syria Tel wants to understand:

1. Why Customer Churn
2. Predicting factors
3. Retaining Customers



02 Solve

Database, Modeling

Database Understanding

3,333

Records in Database

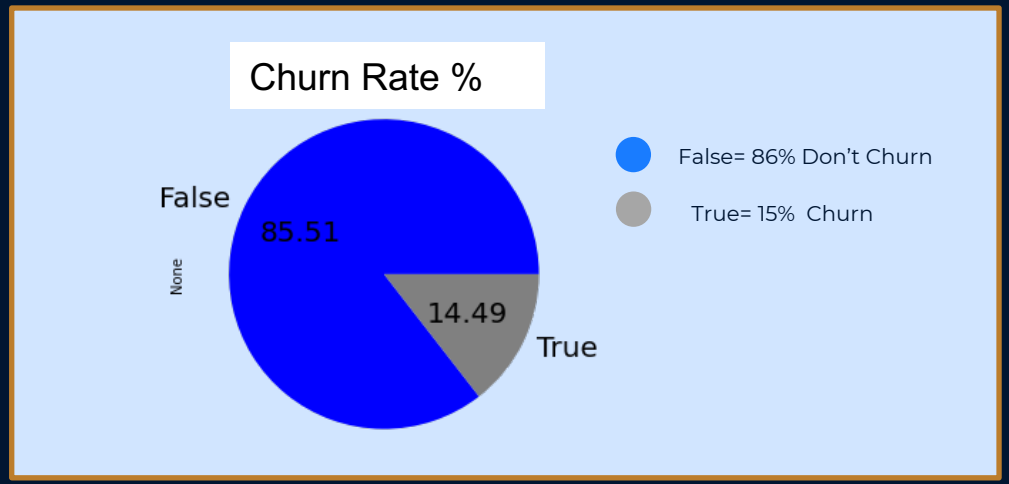
21

Features describing each row

Clean Condition

Non-null values
No duplicate values
Data types changed

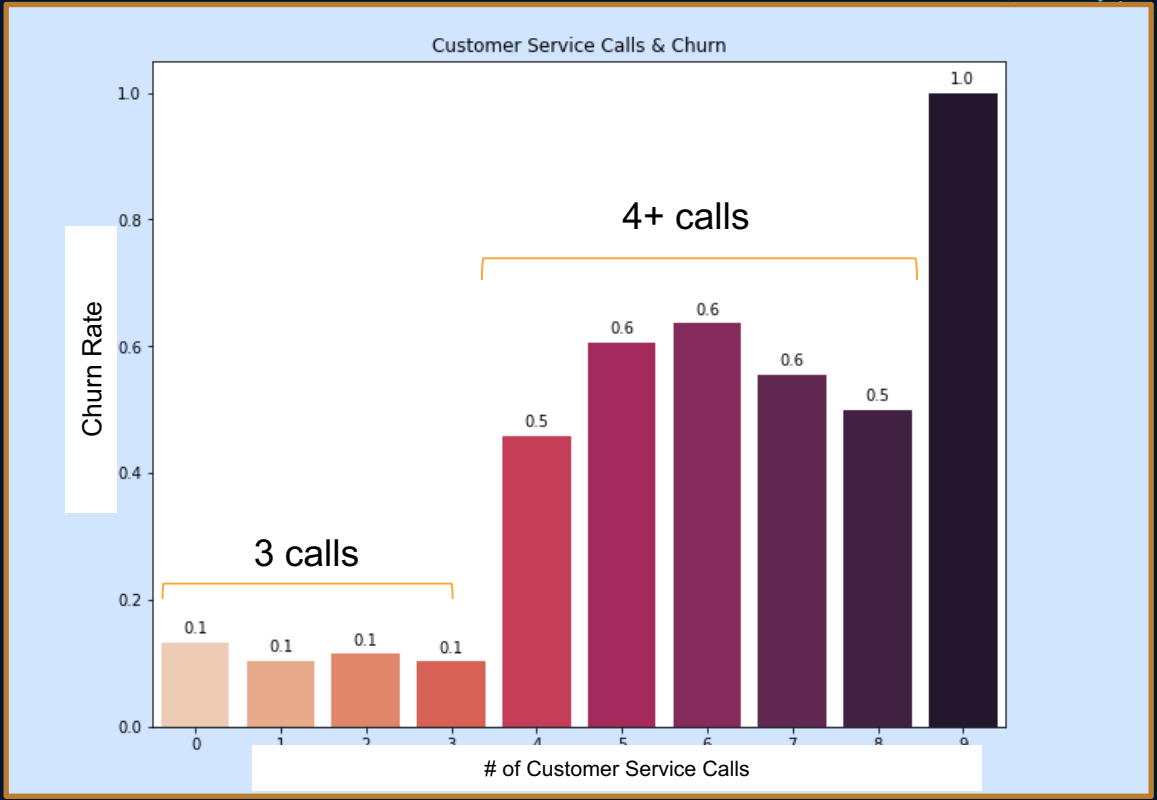
Looking at Churn



The most important features in predicting churn are:

1. Customer's # of minutes during the day
2. Customer's # of evening minutes
3. Customer's international mins in international calls
4. The number of customer calls to customer service

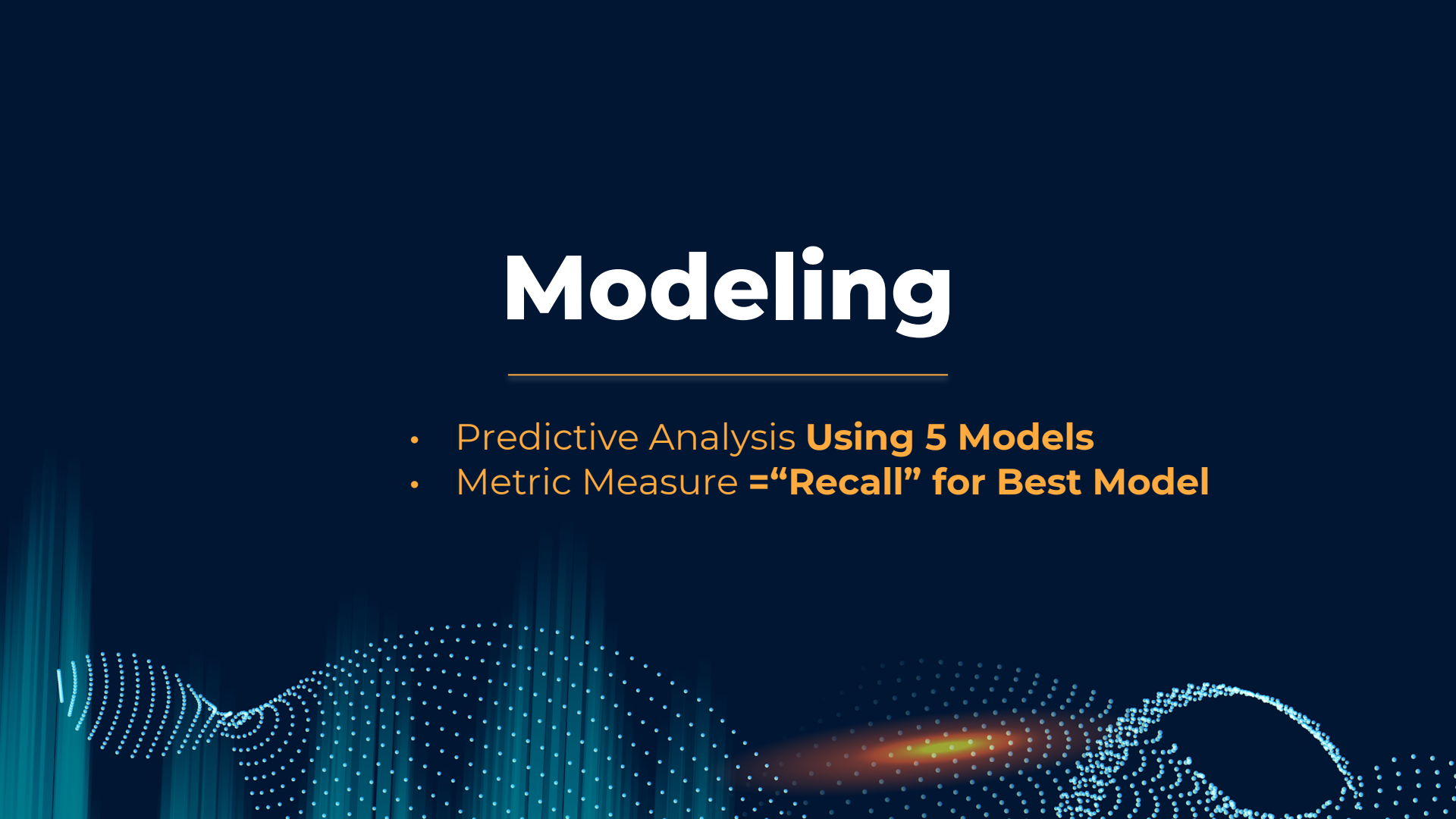
Customers Churn rate & recommendation for business



- ✓ @ 3rd call offer retention incentive
- ✓ Measure incentive
- ✓ Test incentive 6month data gather

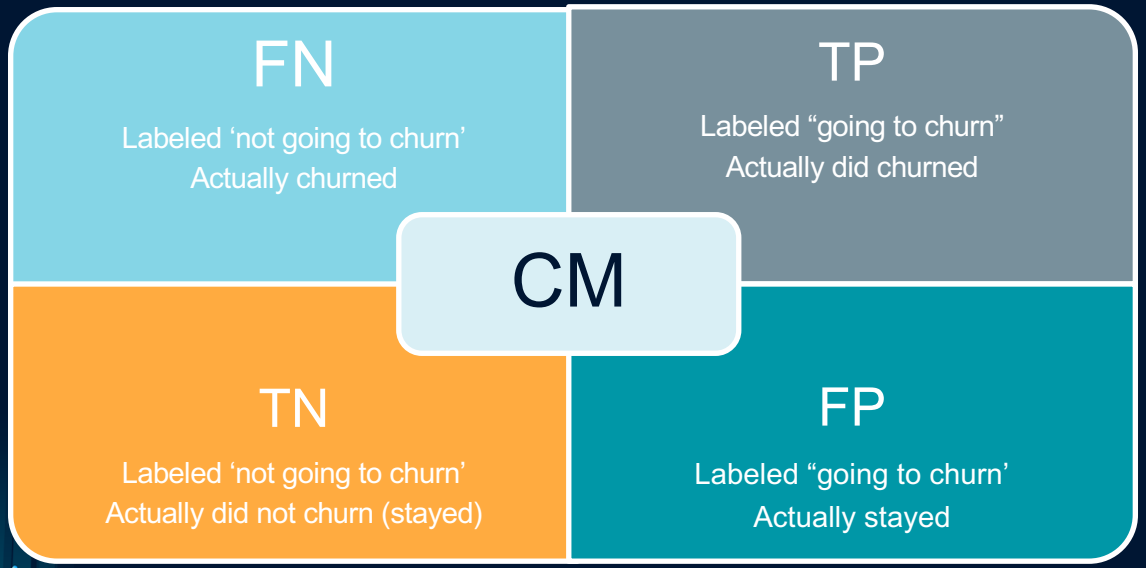
Modeling

- Predictive Analysis **Using 5 Models**
- Metric Measure **=“Recall” for Best Model**



Model Metrics Selection

- ✓ Recall
- ✓ Precision
- ✓ Accuracy



Models Result Summary

	Recall%	Precision%	Accuracy%
Logistic Regression	25	50	86
Decision Tree	75	49	86
Decision Tree (hyperparameters)	80	52	87
Random Forest	66	68	91
Random Forest (hyperparameters)	67	66	91

Best Model to use = Highest Recall %

80%

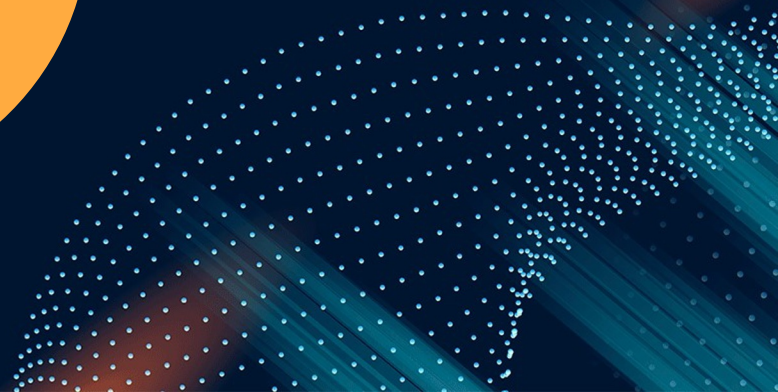
Decision Tree! with hyperparameters

68%

Random Forest

66%

Logistic Regression Baseline



What can we do next?

DATA & BUSINESS

+ Increase dataset = model improvement higher recall
+Training call customer services = lower churn
+Provide incentive at 3rd call = stop churn
+Measure impact with new data
= IMPROVE CUSTOMER RETENTION

Conclusions

- ✓ We discussed the data set and its features
- ✓ We understood churning
- ✓ We realized when churning occurs
- ✓ We recommended things to prevent churning
- ✓ We discussed predictive models
  - ✓ We selected the right metrics
  - ✓ We found the best model for predicting

- Now let’s Acquire more data or larger data
- Discuss exact training programs for customer service
- Discuss pricing and charges for future modeling

THANKS!

Do you have any questions?
datanyc1@gmail.com
+1800- datascientist
jhonathandavid.com