

SyriaTel Churn

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Agenda

- BUSINESS PROBLEM
- DATA UNDERSTANDING
- RESEARCH AND RESULTS
- CONCLUSION AND RECCOMANDATIONS

Syria Tel Business problem

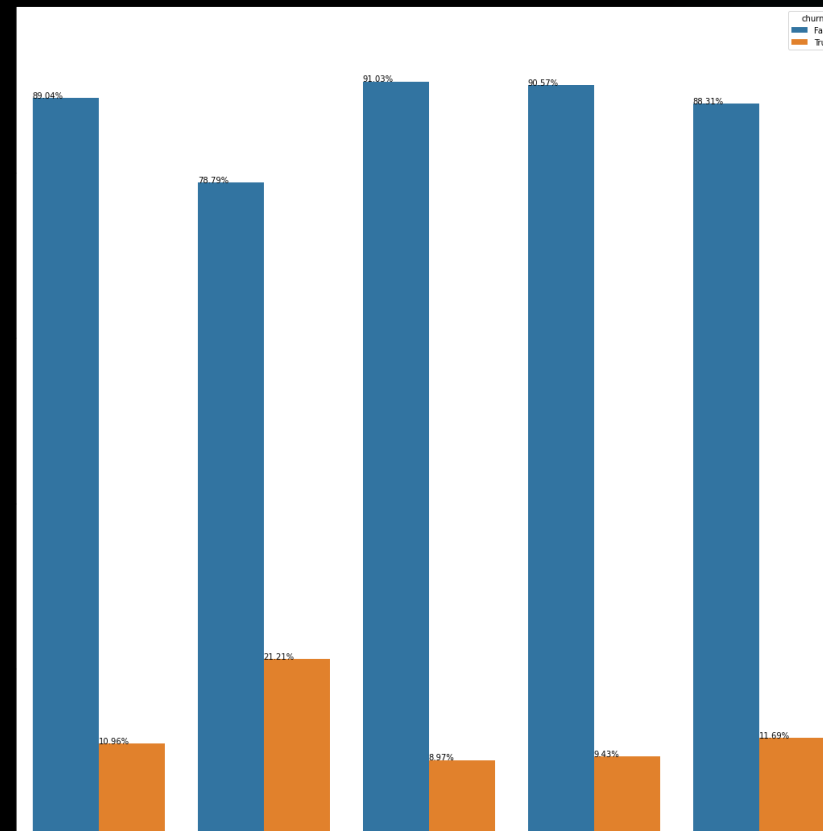
- ▶ SyriaTel has a churn rate of 15%
- ▶ National Average is 10-67% churn rate
- ▶ Churn is the amount of customers canceling the service under 243 days
- ▶ Predict the best way to minimize customer churn rate and reduce false negatives to gain insight on true positives

Featured Data for churn rate

- STATE
- ACCOUNT LENGTH
- INTERNATIONAL PLAN
- AREA CODE
- VOICE MIL PLAN
- AMOUNT OF VOICE MAILS
- TOTAL MINUTES USED PER DAY
- TOTAL MINUTES USED IN THE EVENING
- TOTAL AMOUNT OF CALLS
- TOTAL INTERNATIONAL MINUTES
- TOTAL CUSTOMER SERVICE CALLS
- STAYED OR LEFT THE SERVICE (CHURN)

Data understanding

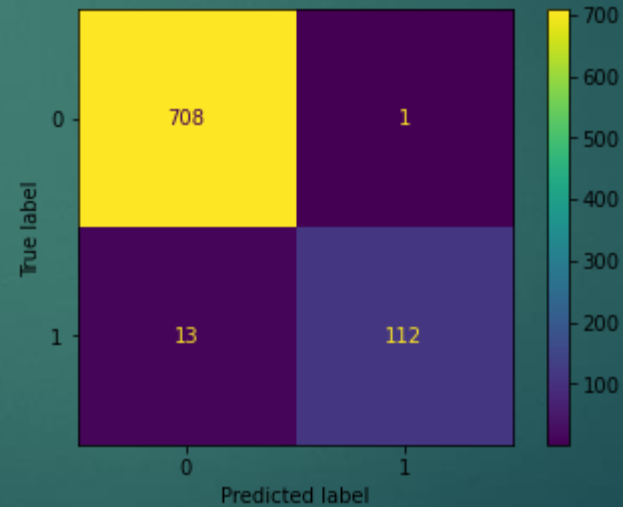
- ▶ Using the state v churn
- ▶ Found that area code did not matter
- ▶ 5 states churned: CA, MD, NJ, TX, And SC



Modeling

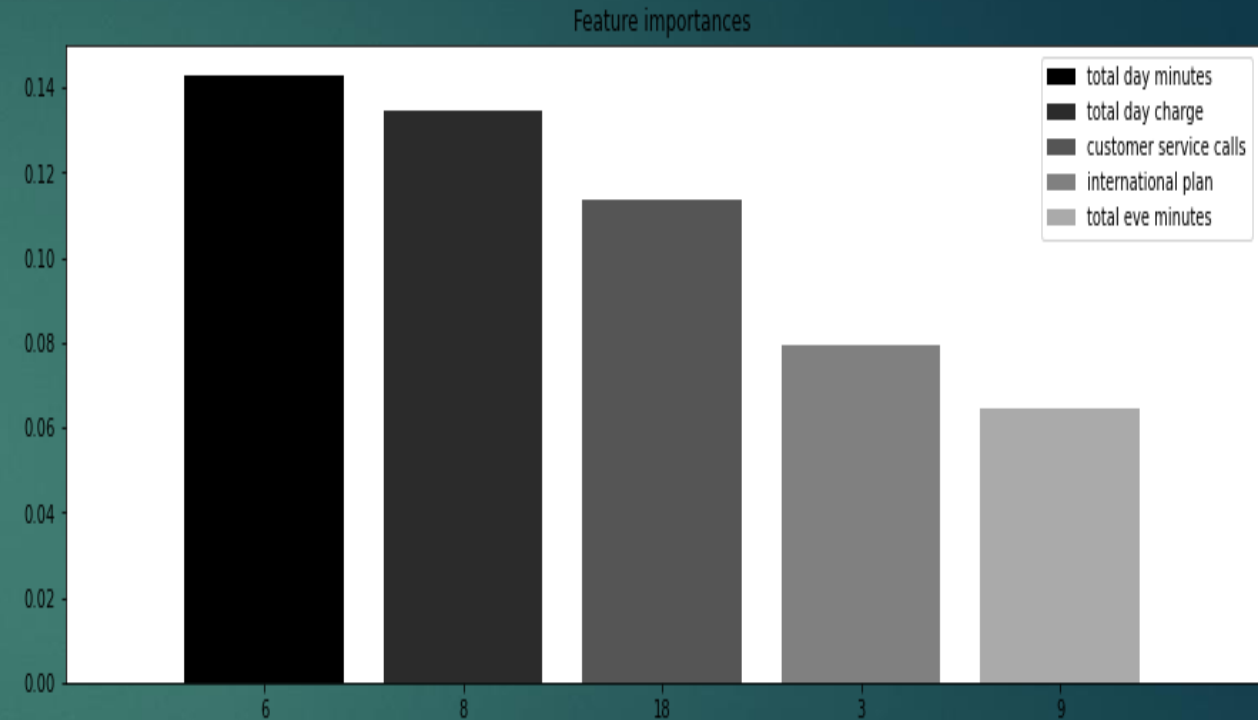
- 1) Random Classifier Model performed the best with 95% accuracy, 73% recall on predicting if a customer will churn or not.
- 2) Better than then 85% accuracy on the modeless baseline

```
***** Model :- RandomForestClassifier() *****
***** Score :- 0.9491017964071856 *****
***** Classification Report *****
*****
precision    recall  f1-score   support
0   0.95   0.99   0.73   280
1   0.95   0.72   0.82   54
accuracy 0.95 334
macro avg 0.95 0.86 0.90 334
weighted avg 0.95 0.95 0.95 334
```



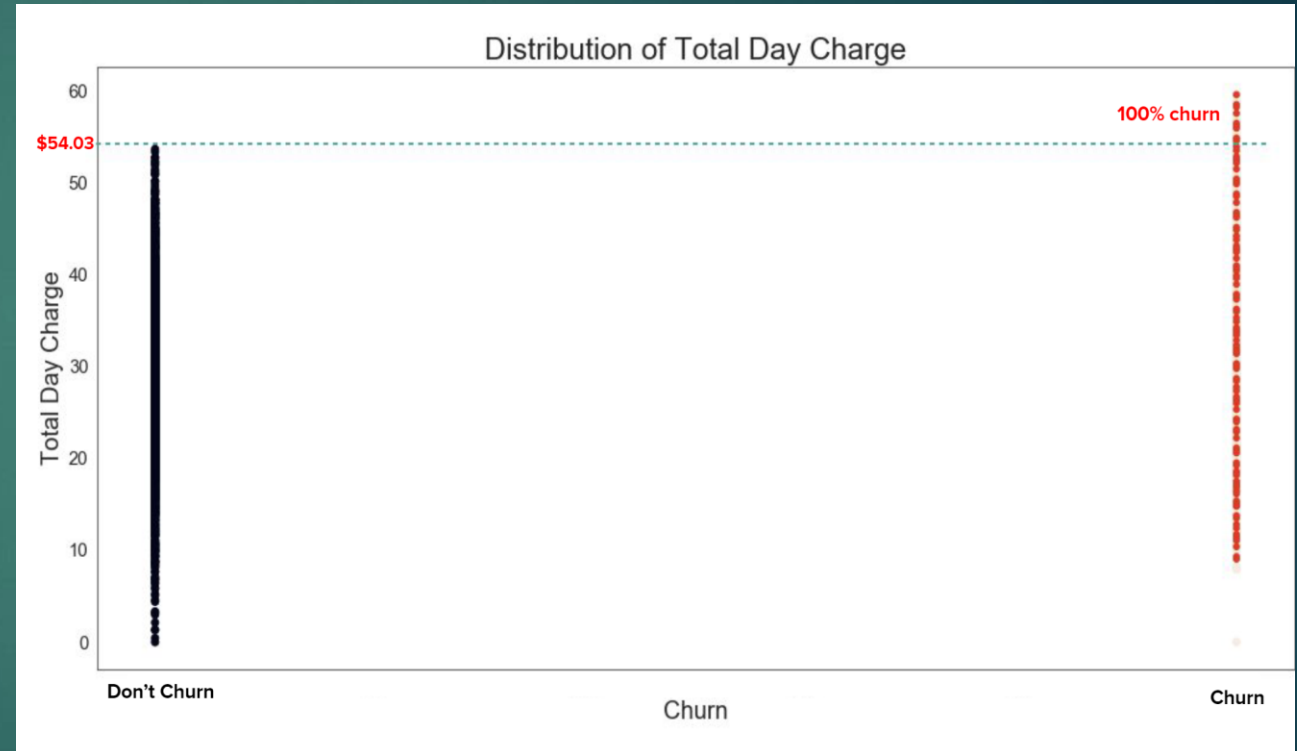
Results

- ▶ Results concluded that the 5 importances for determining churn are:
- ▶ (1) total day time minutes used
- ▶ (2) Total day charge
- ▶ (3) customer service calls per week
- ▶ (4) having an international plan
- ▶ (5) Total amount of evening minutes used



Recommendations

- ▶ 1) Add incentive for customers who use more than 55 minutes daily phone use
- ▶ 2) More marketing to the top 5 states with highest churn rate
- ▶ 3) Figure out why majority of the customers call customer service



Next

- ▶ 1) Cost analysis for acquiring customers compared to keeping customers
- ▶ 2) Look into the service for international callers compared to competitors



Thank you

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