

Telco Churning Analysis based on US data

BUILDING A MODEL FOR THE SYRIAN MARKET



Telco companies in the US are thought to lose \$1.6 trillion dollars annually because of churning.

Business Questions

- 1) Can we predict what customers are more likely to churn?
- 2) What are the predominant factors determining high churn rate?

Methodology

- Explored a sample US telco dataset of 3333 users with accounts ranging from 1 to 246 days old
- Created a baseline model to predict churn rate based on this dataset
- Built other 3 competing models to improve on the baseline one
- Selected a winning model and extracted insights also applicable to the **Syrian** telco market



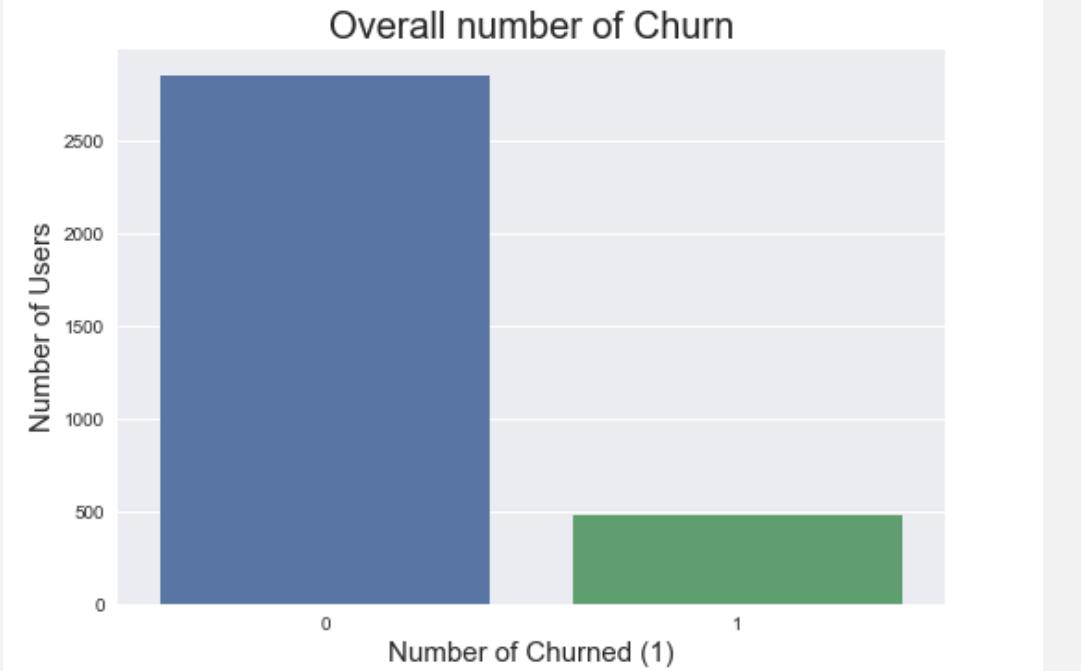
What is a typical churn rate?

Churn Rate

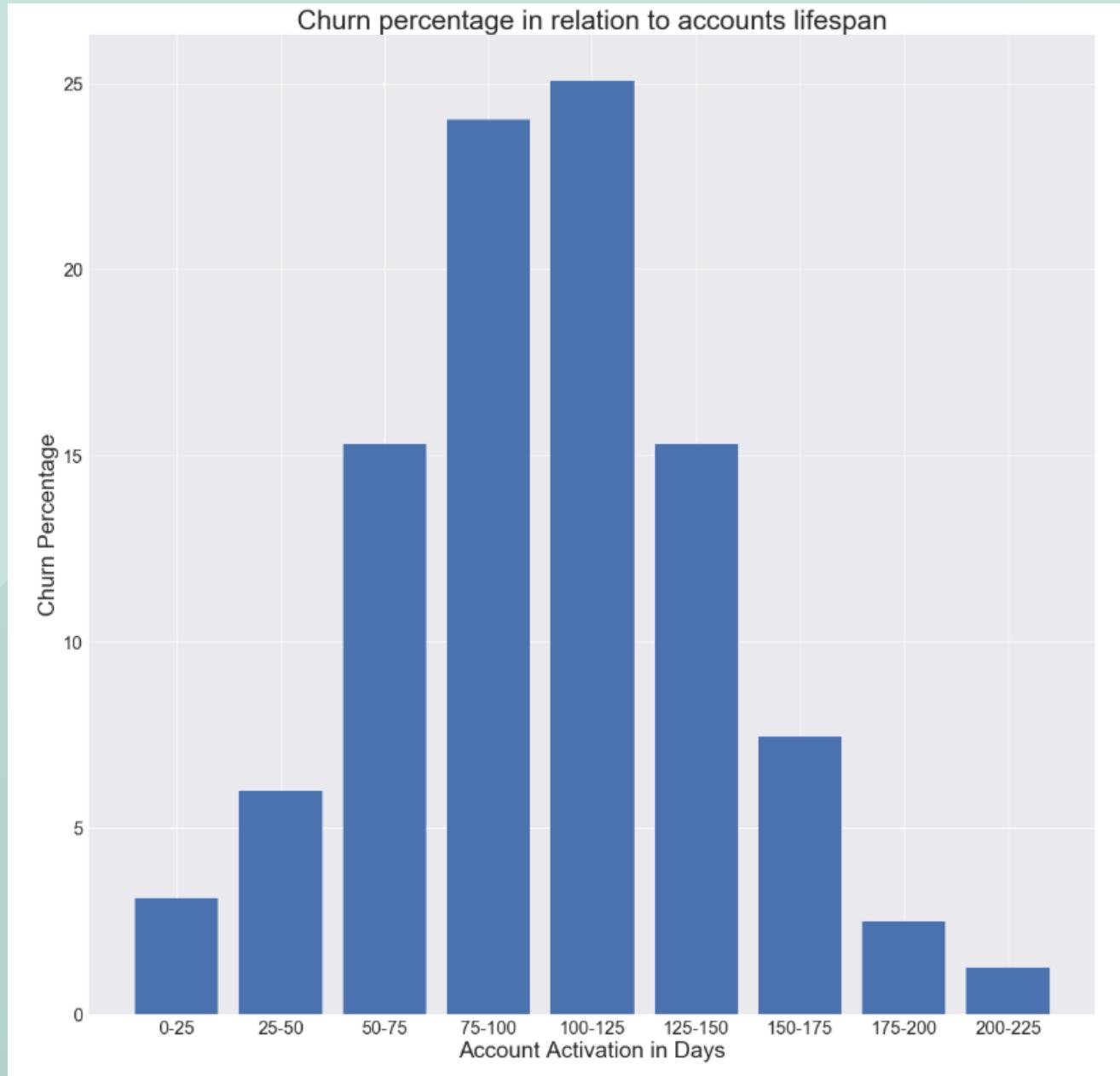
5% - 28%

*can vary across telco companies

In our dataset **14.49%**



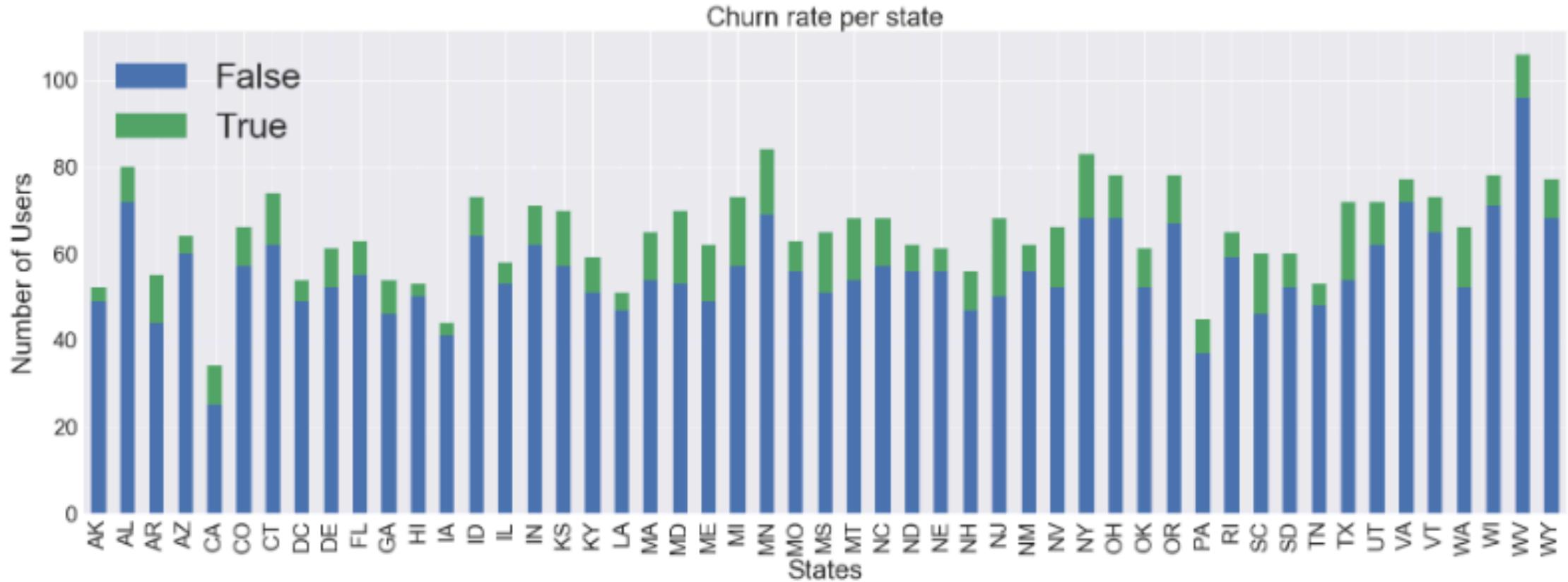
When are people more likely to churn?



In between 100-125 days after activation

1 out of 4 churners

Users Churning per State



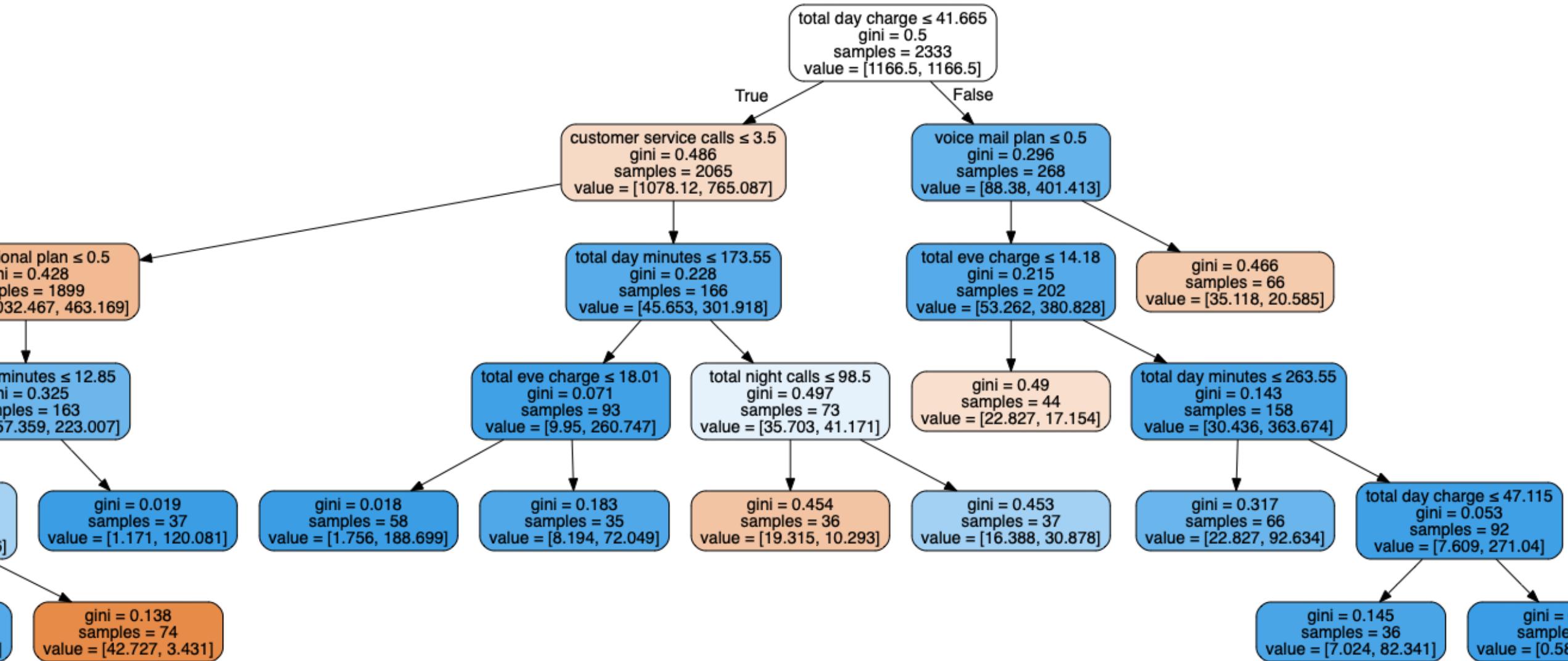
There are significant differences in terms of churn rate that need to be further investigated

Highest Churn Rate: **New Jersey 3.7%**

Lowest Churn Rate: **Arkansas 0.7%**



Winning Model — Decision Tree



Final Decision Tree Model Evaluation

Can we predict what customers are more likely to churn? Yes

- Our model is capable of identifying 8 future churners out of 10
- It is accurate at a 87% rate in terms of identifying both churners and non-churners customers combined

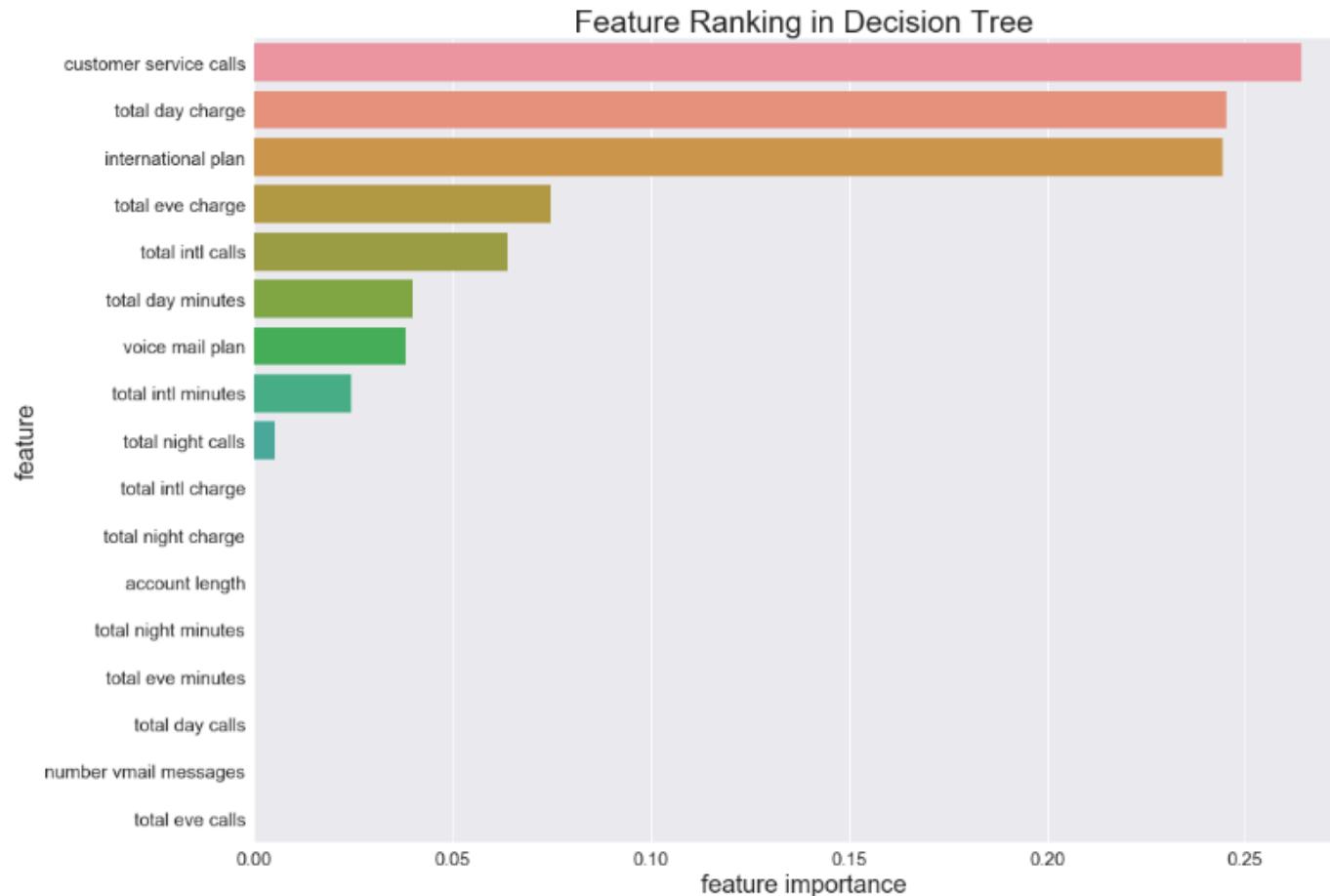
How much money could this model save you every 1000 customers?

- Pre-model implementation. Total Cost = \$45,360 per 1000 customers
- After-model implementation. Total Cost = \$20,445 per 1000 customers

Estimate of cost reduction per 1000 customers = **\$ 24,915**



What are the predominant factors in determining high churn rate?



3x more important than any other feature

- 1) Customer Service Calls
- 2) Total Day Charge
- 3) International Plan



What happens to churn rate when customer service calls increase?

*everything else held constant

Testing on Customer from 0 calls to 4 calls simulation

Based on our model

100% Decrease in Churn Rate

Key Takeaway:

4 customer service calls are the limit threshold at which clients are still being serviced well. 4 calls and above is a red-flag in terms of provider disservice.

Testing on Customer from 0 calls to 7 calls simulation

Based on our model

77% increase in Churn Rate

Recommendations

- 1) Closely monitor people who have had active accounts since 100-125 days and check-in on them to see if they are satisfied
- 2) Check on the customer service calls quality after the same customer calls 4 times
- 3) A marketing campaign that portrays SyriaTel's customer service as the friendliest or and/or most approachable in the industry
- 4) Offer competitive international plans to your customer base