

SyriaTel: How to keep the customer churn?

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Self-paced

Outline

- The aim: to provide suggestions about how to keep the customers churn to SyriaTel company
- Data analysis: A binary classification model is built to identify important features closely related to customer churn
- Suggestions

Data

- Data source:
 - bigml_59c28831336c6604c800002a.csv
- Data summary:
 - 20 features
 - 1 target: churn with false or true
 - 3333 customers

RangeIndex: 3333 entries, 0 to 3332

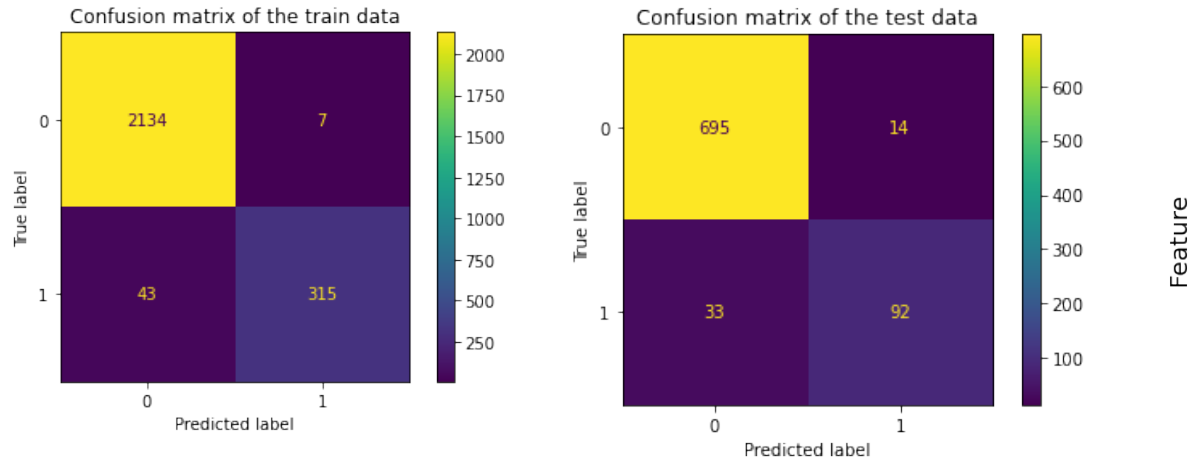
Data columns (total 21 columns):

#	Column	Non-Null Count	Dtype
0	state	3333 non-null	object
1	account length	3333 non-null	int64
2	area code	3333 non-null	int64
3	phone number	3333 non-null	object
4	international plan	3333 non-null	object
5	voice mail plan	3333 non-null	object
6	number vmail messages	3333 non-null	int64
7	total day minutes	3333 non-null	float64
8	total day calls	3333 non-null	int64
9	total day charge	3333 non-null	float64
10	total eve minutes	3333 non-null	float64
11	total eve calls	3333 non-null	int64
12	total eve charge	3333 non-null	float64
13	total night minutes	3333 non-null	float64
14	total night calls	3333 non-null	int64
15	total night charge	3333 non-null	float64
16	total intl minutes	3333 non-null	float64
17	total intl calls	3333 non-null	int64
18	total intl charge	3333 non-null	float64
19	customer service calls	3333 non-null	int64
20	churn	3333 non-null	bool

dtypes: bool(1), float64(8), int64(8), object(4)

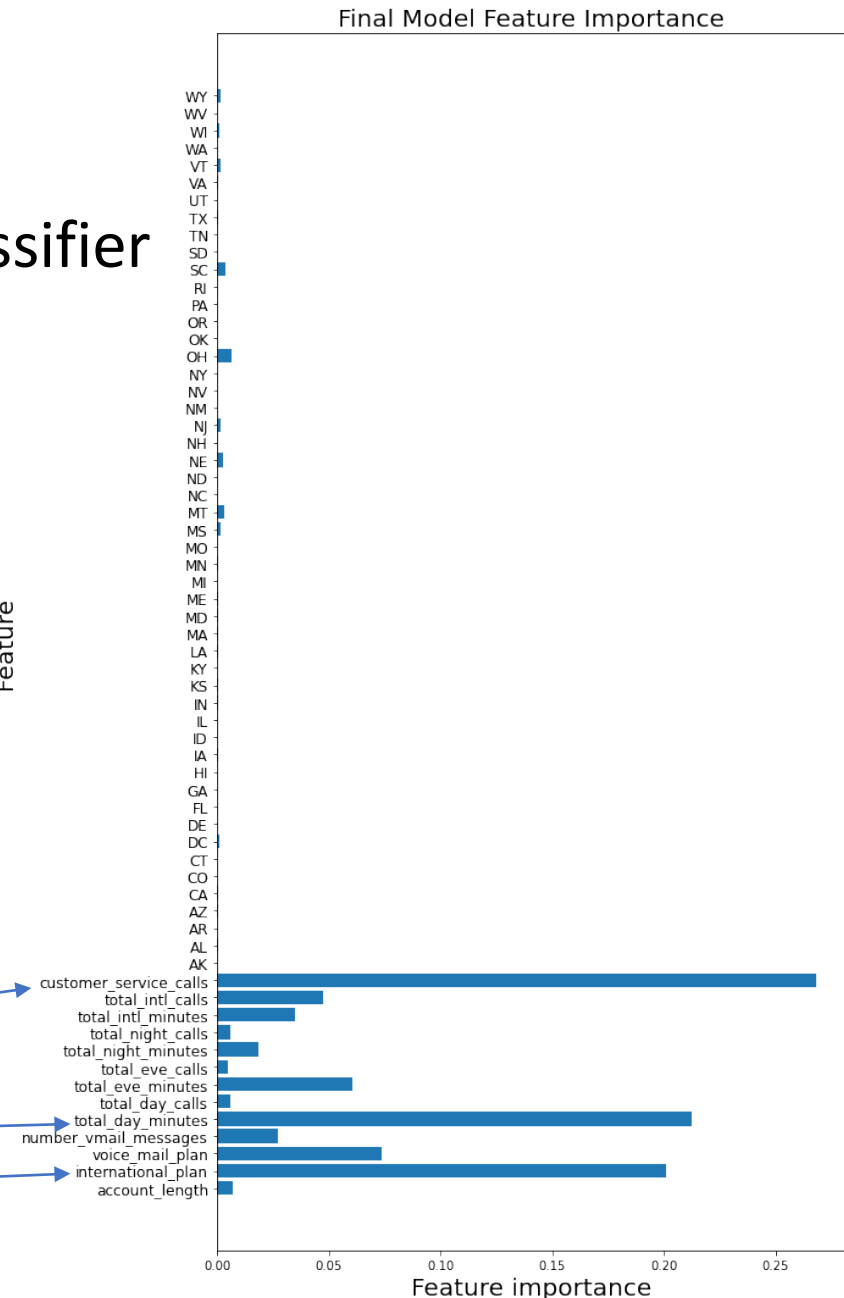
Data Analysis

- Classification model: GradientBoostingClassifier
- Classification performance

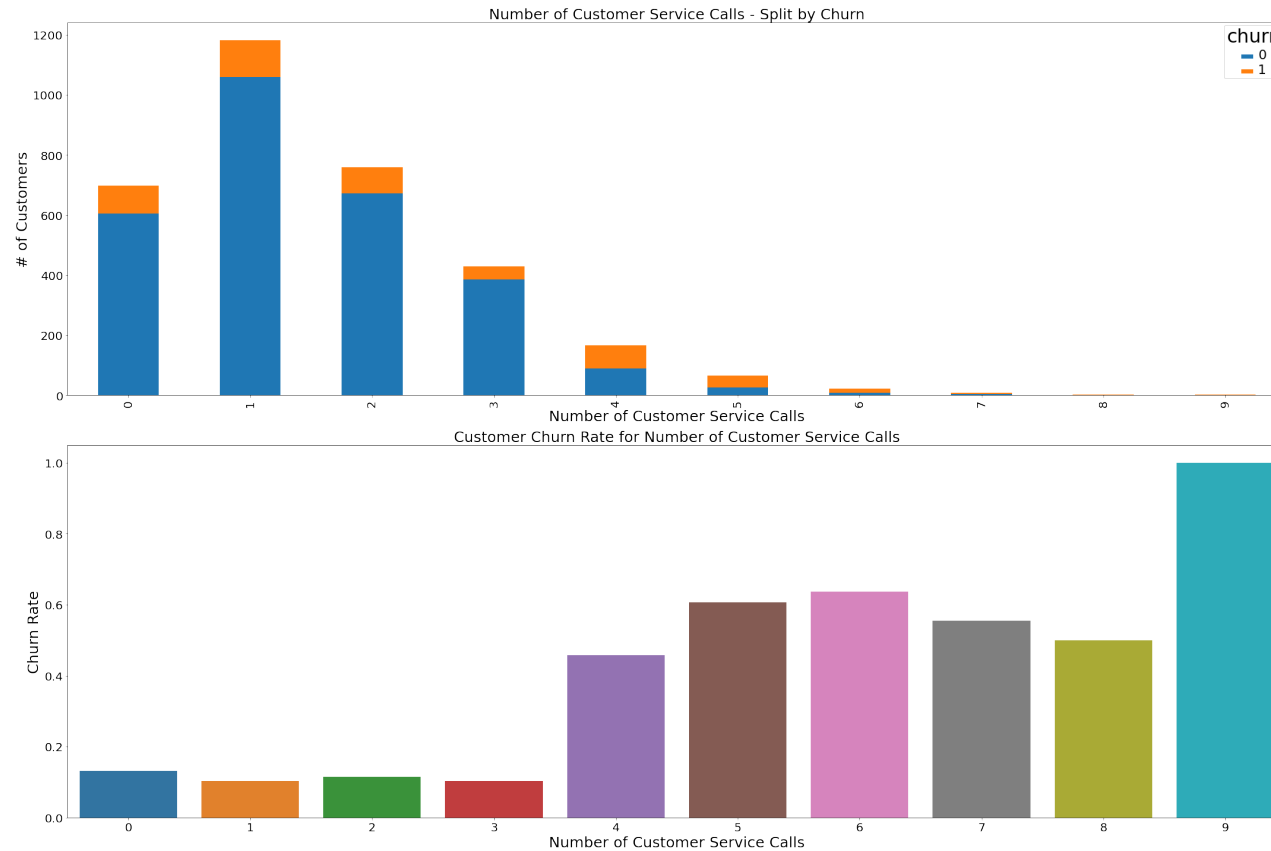


- Important features:

- Customer_service_calls
- Total_day_minutes
- International_plan

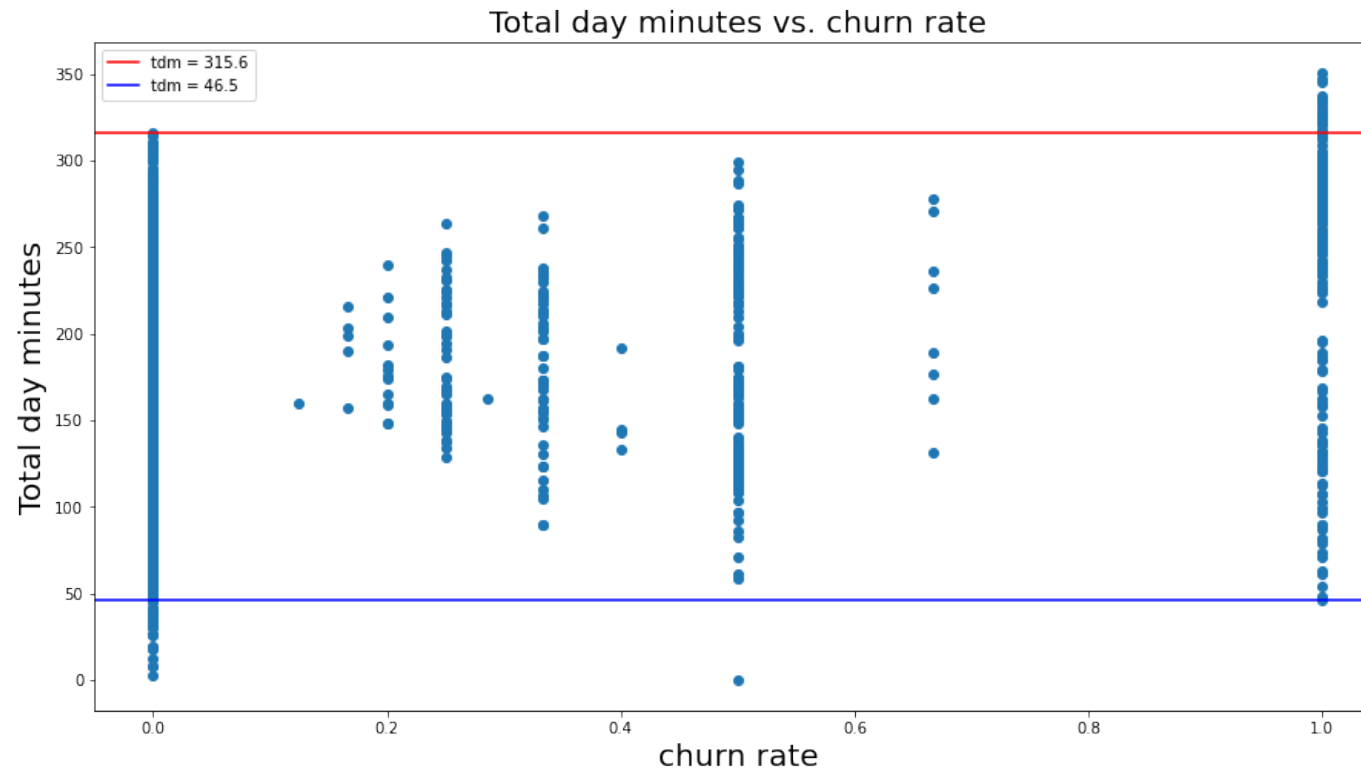


Suggestion based on customer service calls



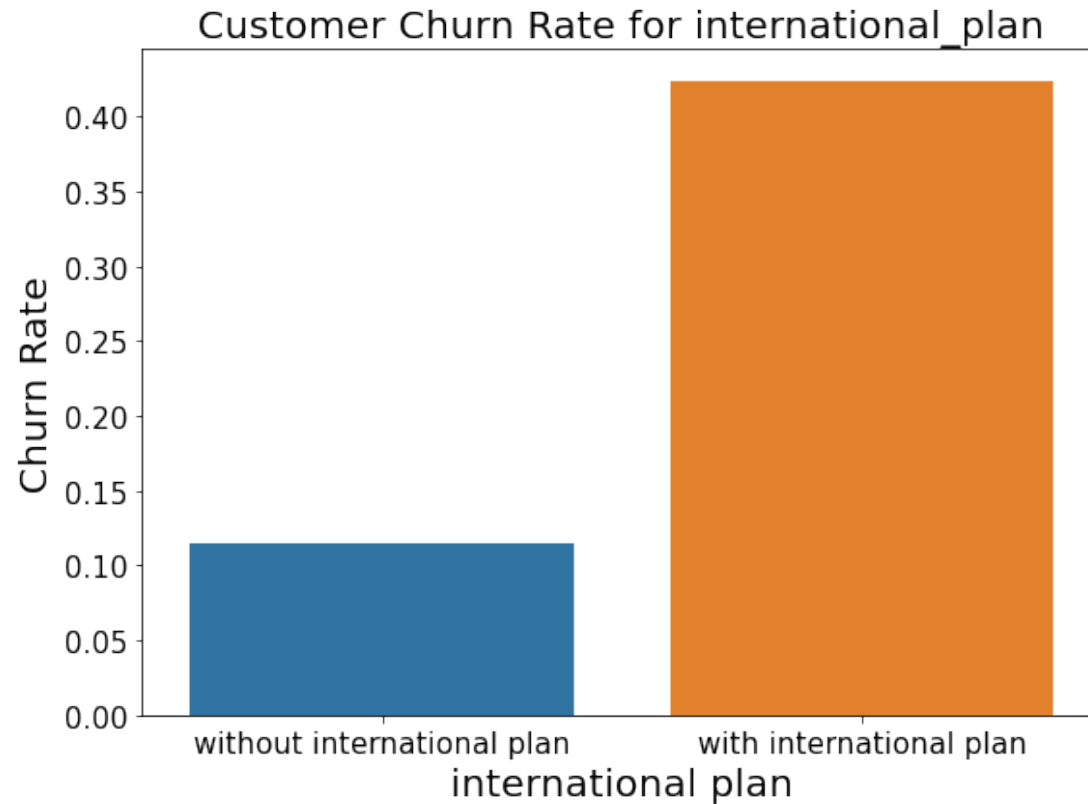
Increase the service calls will keep the customers churn with the service

Suggestion based on total day minutes



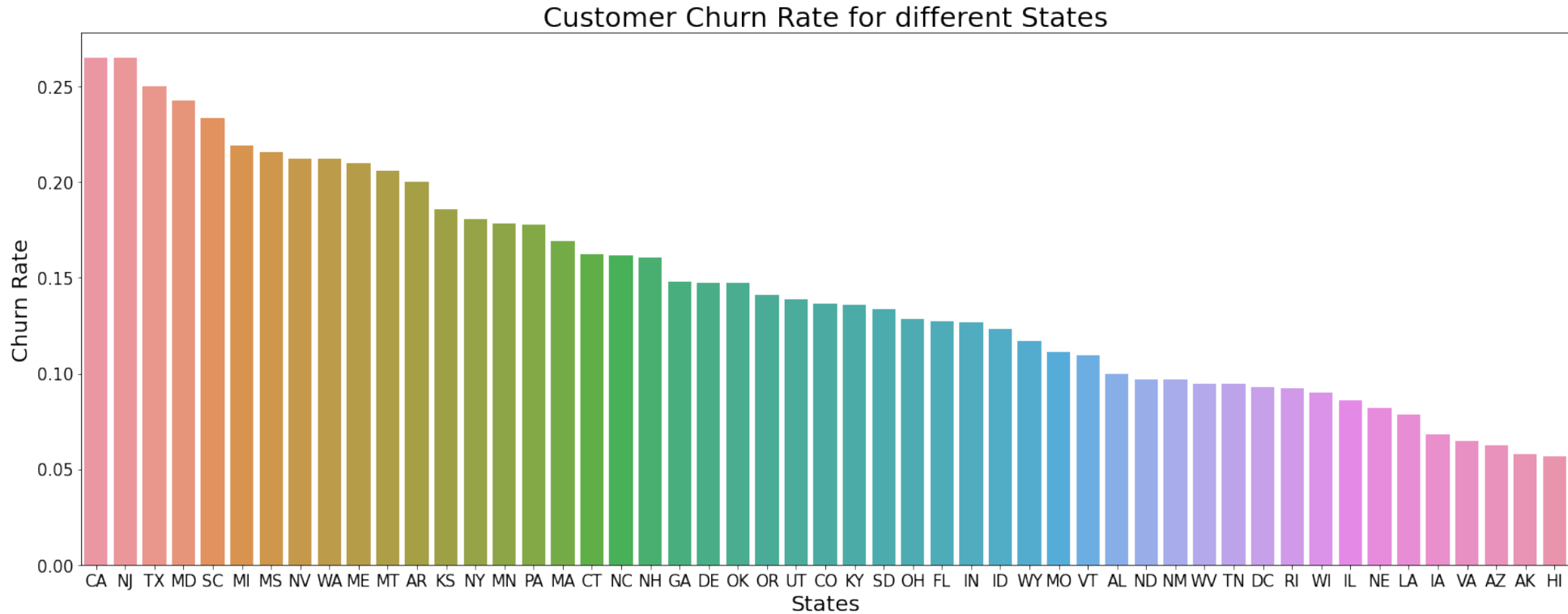
The company needs to work more on the customers with the total day minutes between 46.5 to 316 mins

Suggestion based on international plan



The company could promote the international plan to keep customers churn with the service

Suggestion based on state



The company needs to pay more attention on customers from AZ, AK and HI states