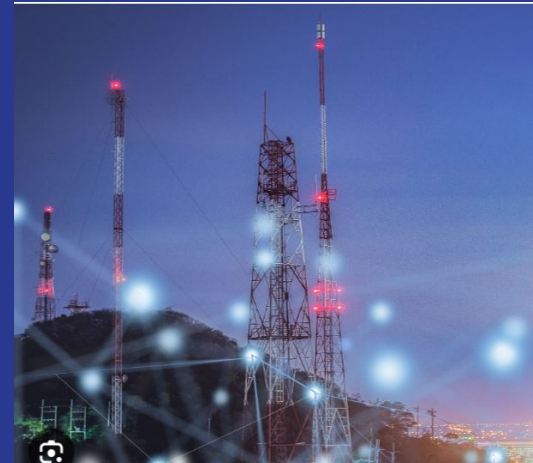


Predicting Customer Churn

SyriaTel Communication



Churning of dissatisfied customers from a network result in a loss of revenue. Acquiring new customers comes with it's own cost. It is commonly acknowledged that the expense of acquiring a new customers is more higher compared to retaining an existing one.

Company goal

Want to increase company revenue by reducing churn.



Our team goal

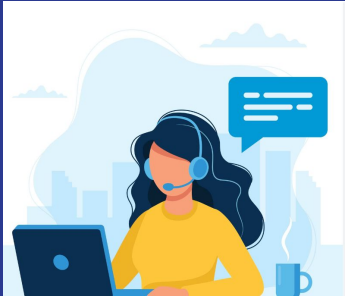
To use predictive modeling to target most churnable customers and address their problem.



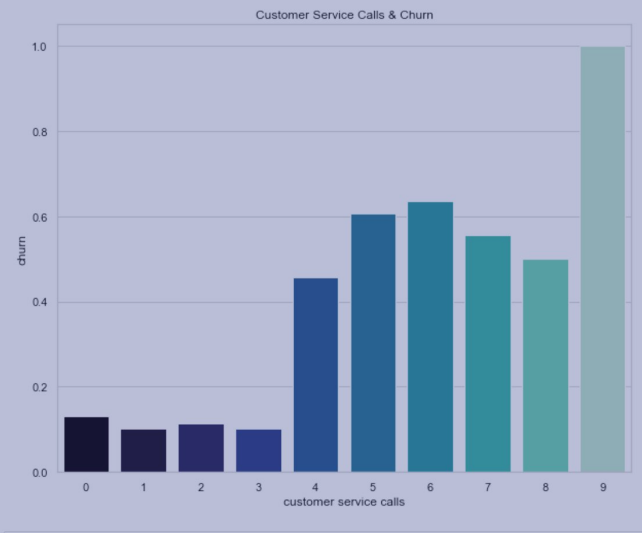
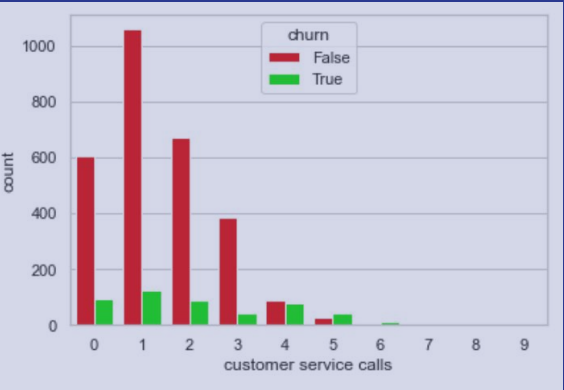
Effect

By gaining a deeper understanding of churn factors, business can effectively mitigate customer attrition, enhance customer retention rate and increase revenue.

Customers Service calls

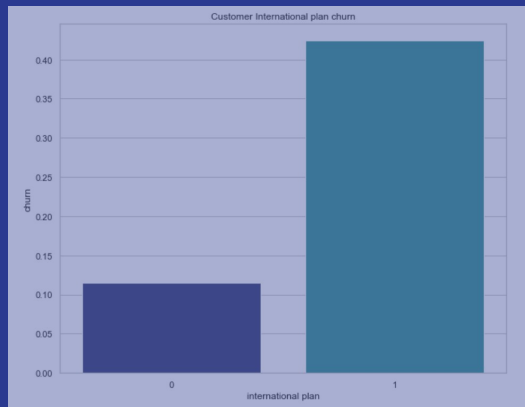


Here we see customer service calls and “churn” and “not churn” count

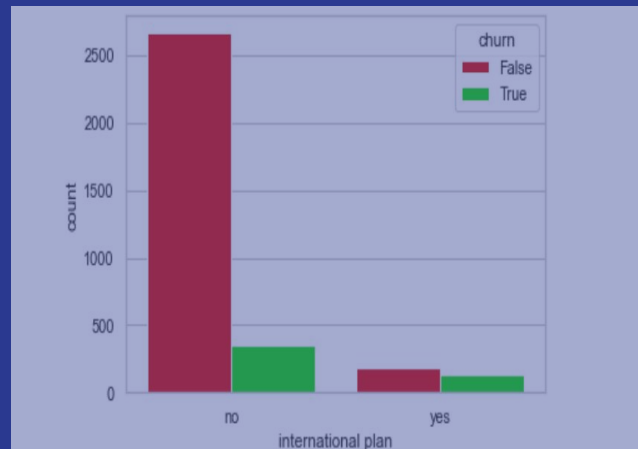


We have observed an increase in customer churn rate among individuals who have made more than four customer service calls.

Customers with International plan

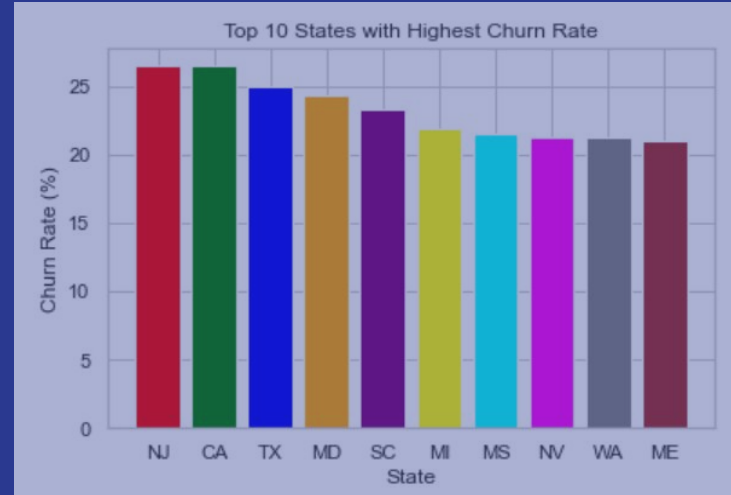
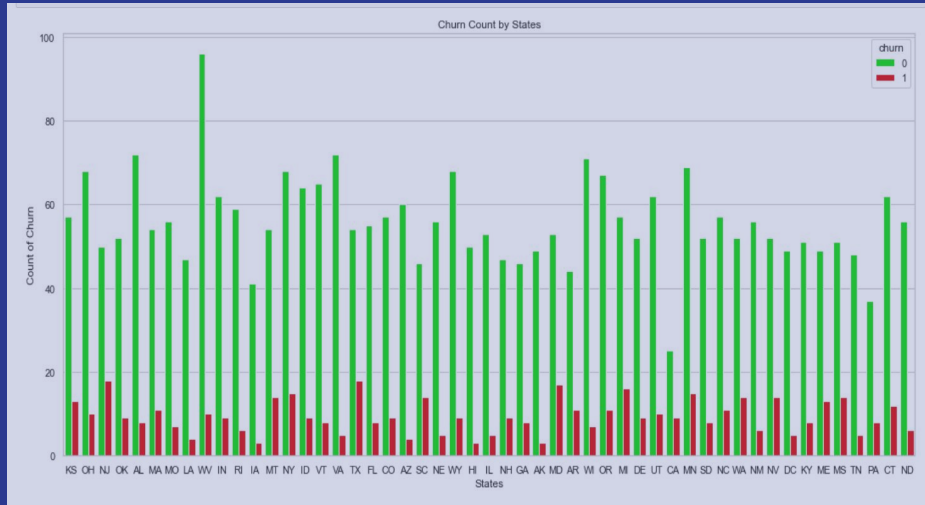


churn	False	True	percentage churn
international plan			
no	2664	346	11.495017
yes	186	137	42.414861



There are 323 customers with international plan from which 42% churn
There are 3010 customers without international plan from which 11% churn
People with international plan churn more than people without international plan

Customer churn by States



The reason:

Competition, Network Quality, Population Mobility(more tourist more churn)

XGBoost

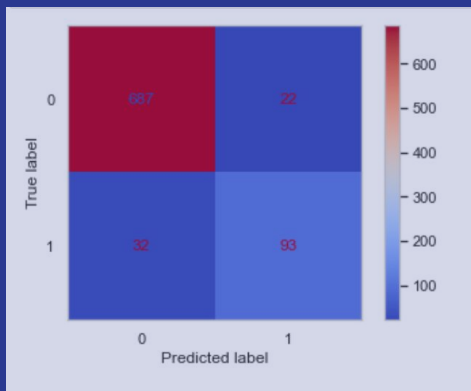
Model predicted 22 times customers will left, actually they stayed company need to offer discount for this group

Model predicted 32 times customers will not left, actually they left company may need to offer free month rate to keep this group, because to acquire new customers is more expensive than keeping old.

Model predicted 93 times customers will left and actually they left. We need to offer some percentage discount for this group in advance.

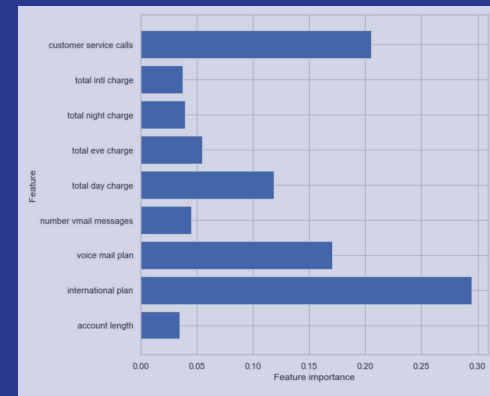
Model predicted 687 times customers will not churn and they actually did not churn. Company nothing have to offer this group.

Actual	Predicted
0	1
1	0
1	1
0	0



Accuracy: 0.93
Recall: 0.74
Precision: 0.88
F1_score: 0.77

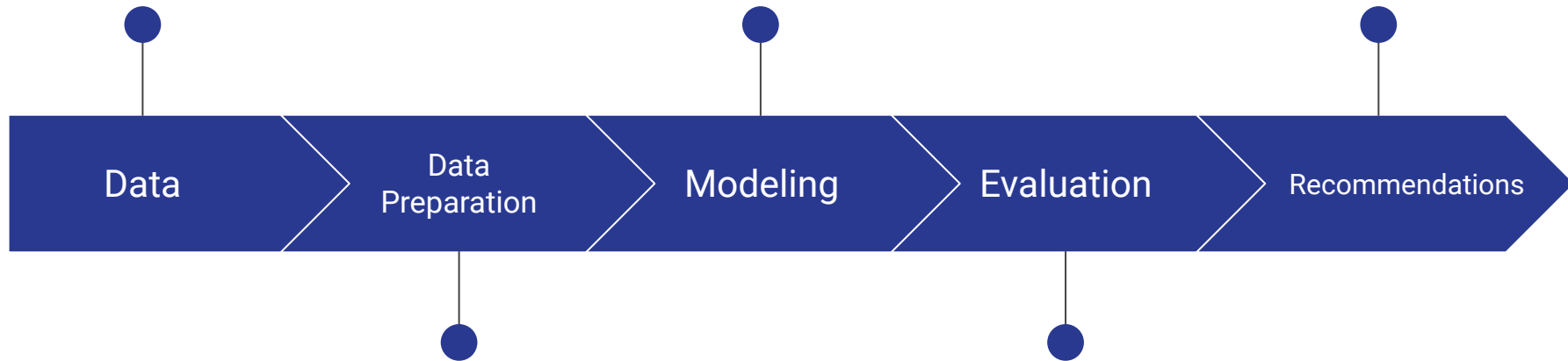
Factors most impact churn for this model



Telecom data

3333 entries.

19 columns



Solution

More premium subscribers

Recommendations:

Customers who engage in more than four customer service calls can be rewarded with incentives, fostering a positive customer experience. Additionally capturing and preserving data and detailed records of their complains and the reason for their calls will enable data science team to comprehensively analyse.

Review cost of international plan and calls. Avoid unexpected charges to avoid dissatisfaction. To find way to avoid switching internet communication apps.

To get more data to get information about churn rate by states. Competition, Network Quality, Population Mobility(more tourist more churn).



The team

