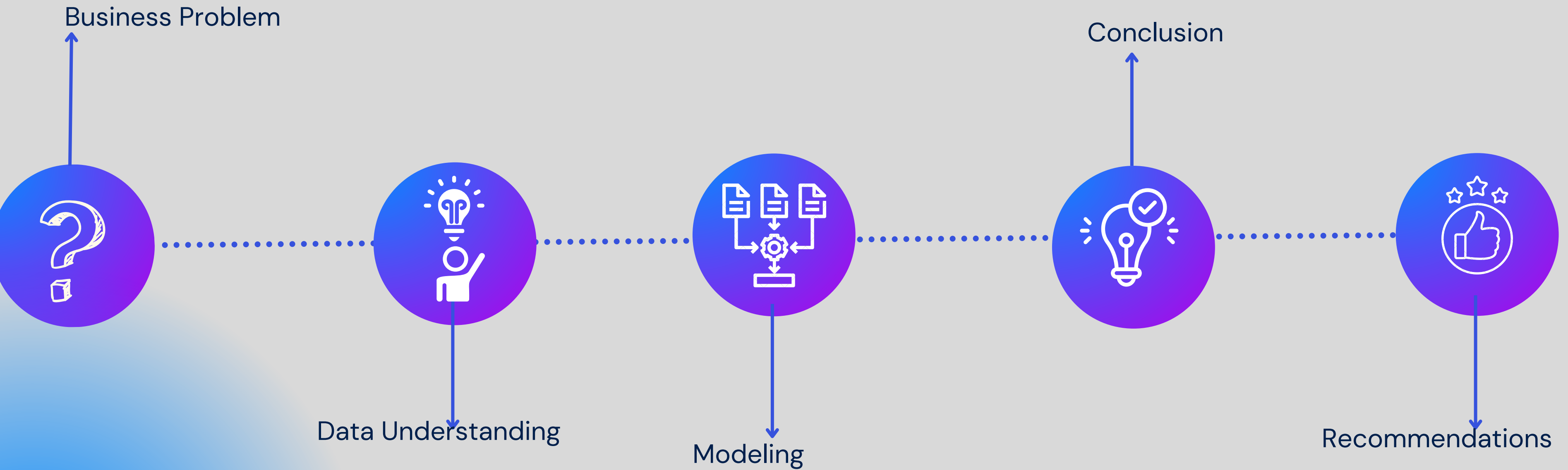Predicting SyriaTel Customer Churn

Team

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- Mercy Ronoh
- Ashley Simiyu

Outline

Business Problem

Conclusion

Data Understanding

Modeling

Recommendations

Business Problem

- SryiaTel, a telecommunication company, is facing a customer churn challenge
- Customer unsubscription is dropping revenue and decreasing market share

Project Objectives

- Explore user behavior and patterns that influence customer churn
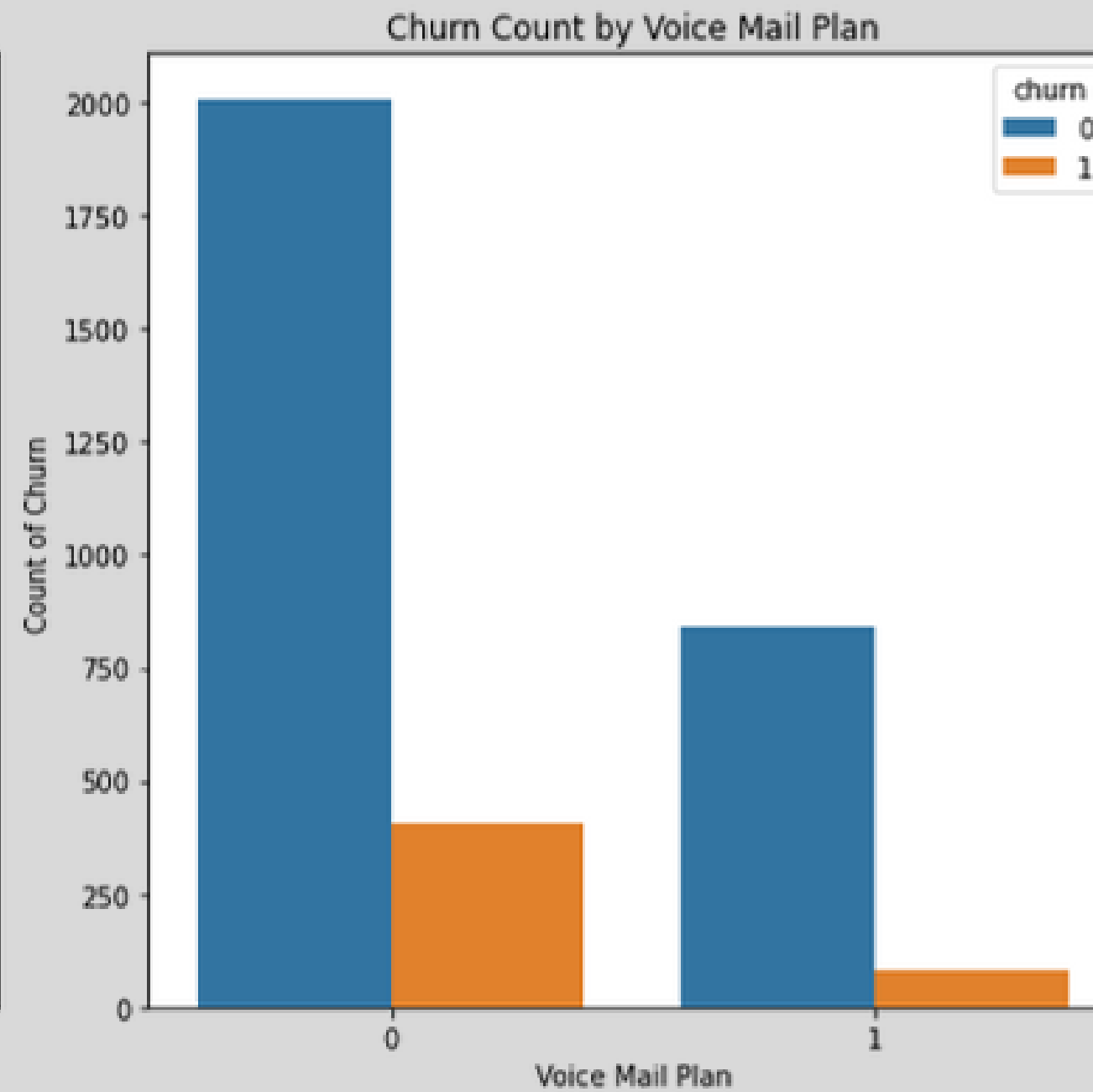- Develop a tool using past customer data to predict potential unsubscribers
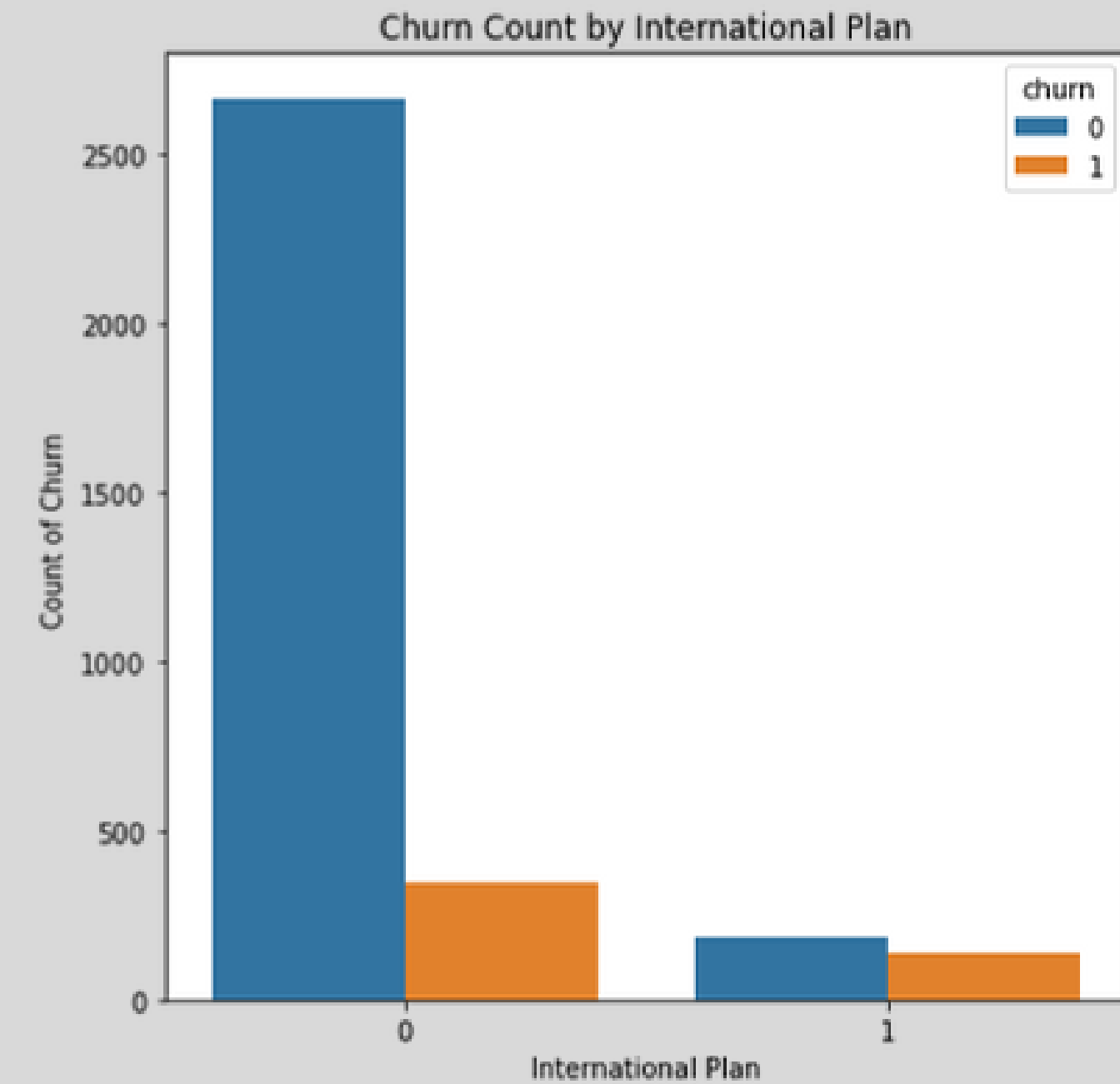
Explore Data

- Data source: Kaggle

- Features: churn, account tenure, plans, total calls, total, minutes, customer service calls, charges, area code.

- Distributed across 3333 rows and 20 columns

- 2850 (85.5%) of the customers did not churn

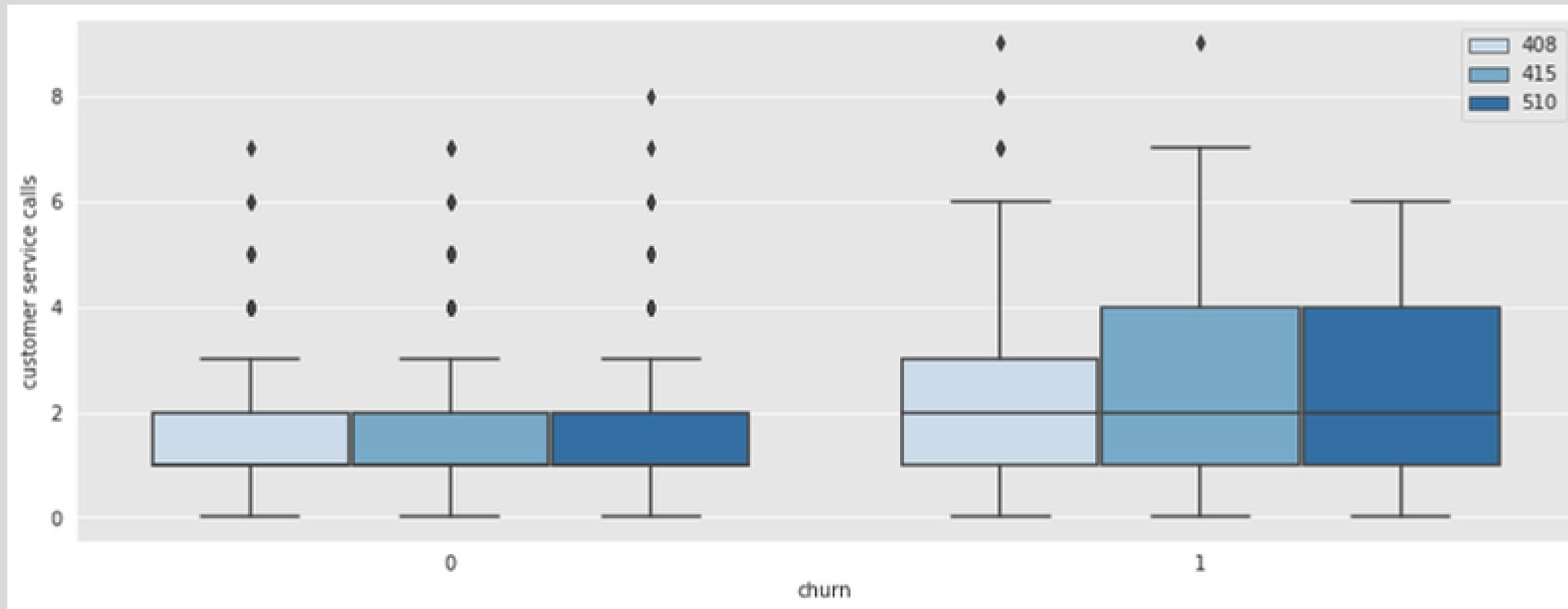- 483(14.5%) of the customers **churned**
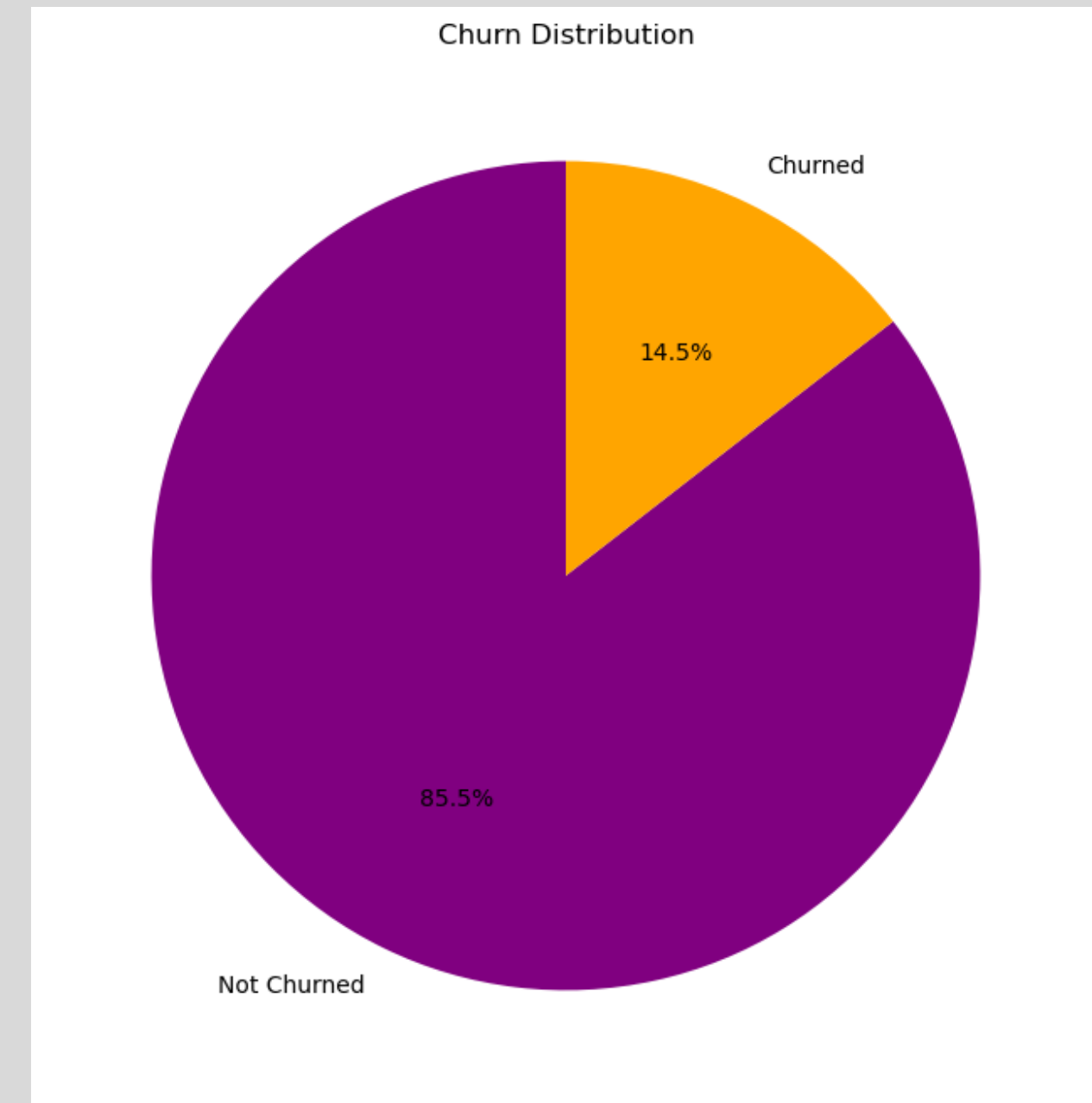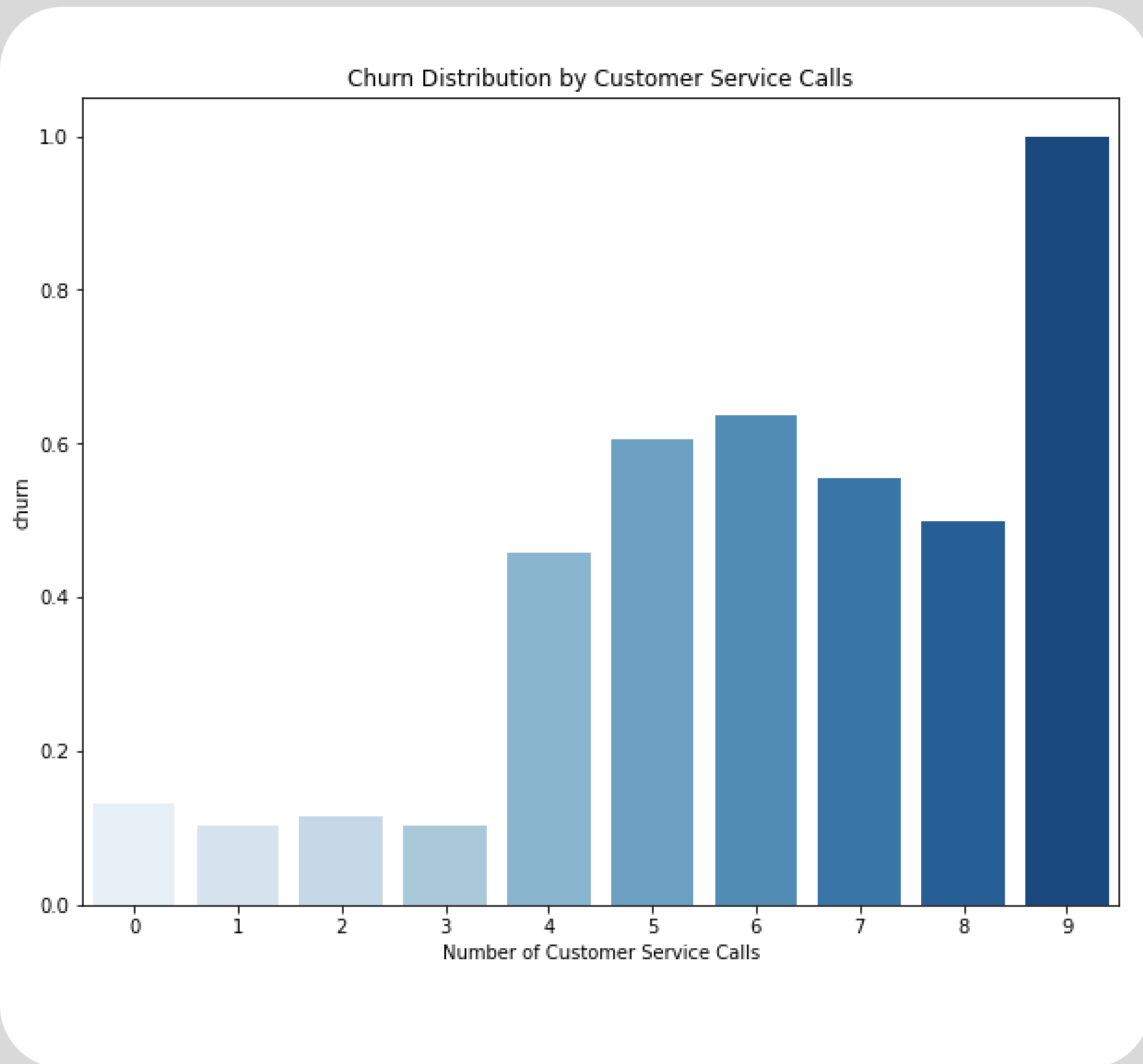
Churn by Plan

- People who do not have an international plan and a voice mail plane have a higher churn rate
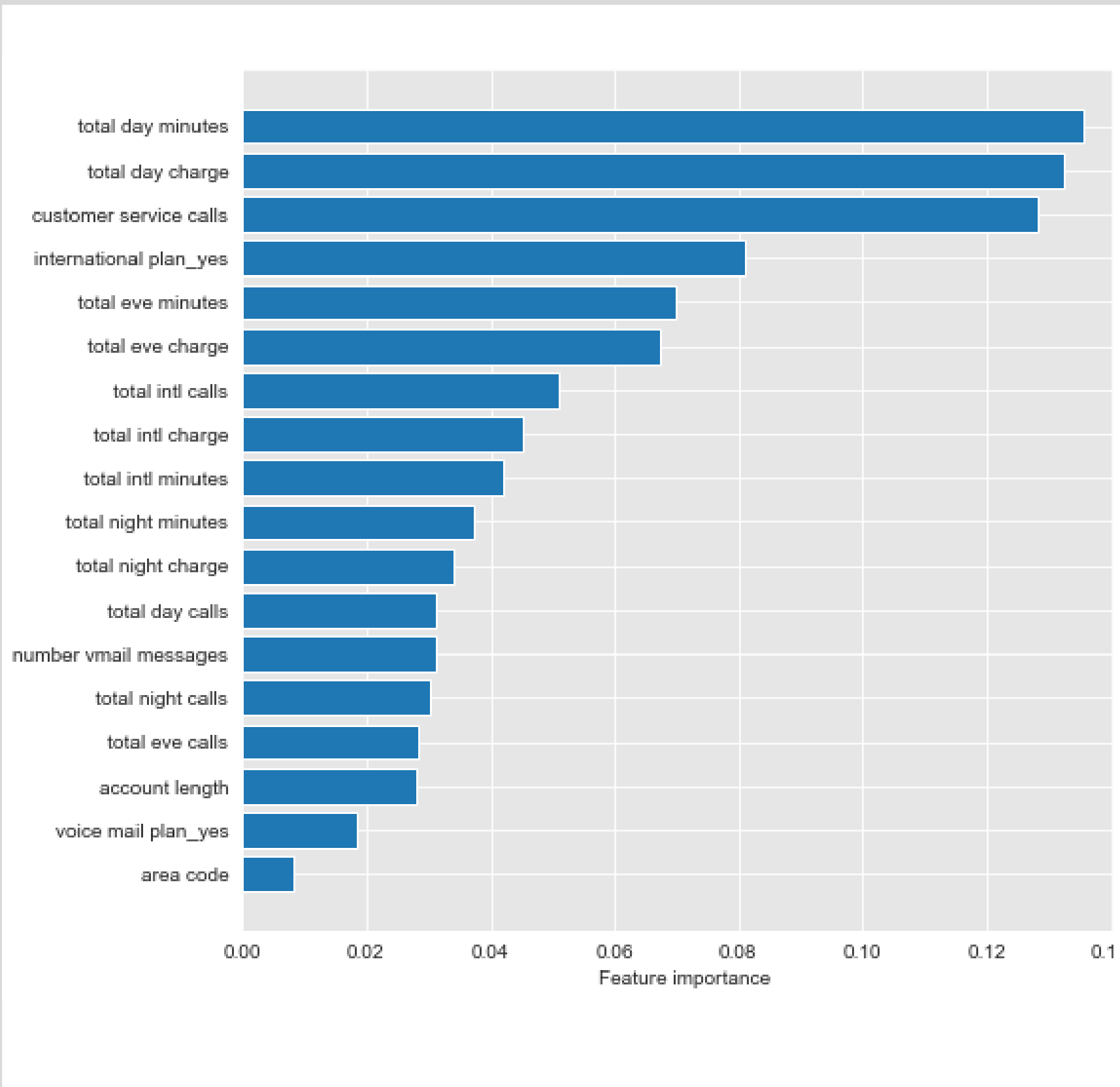
Churn Area Code

Area Code 415 & 510 have a high customer service calls which in turn have a high churn rate

Churn by Customer Service
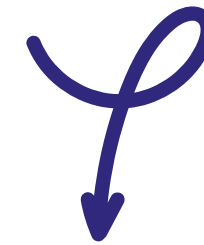

Churn Distribution by Customer Service Calls

- As the number of customer service calls increases, the likelihood of churning also increases.
- Above 4 calls, the churn rate increases.

Our best tool...

- Best Model: Random Forest

- Predicts 95% of the results correctly.

Top drivers of customer churn:
- The total number of day minutes a customer spend on call.
- The total amount a customer is charged on daytime calls
- The number of customer service calls a customer make
- The presence or absence on an international plan

Conclusion...

- The higher the number of calls the higher the churning rate

- Area codes 415 & 510 have a higher churn rate

- People who do not have an international plan and a voice mail plane have a higher

  churn rate

- The best model predicted 95% of the results correctly

- The averages for making the calls per minute ranges from 0.05(Night time) to

  0.27(International Calls)

Recommendations

- Targeted Promotions for high churn area codes and high daytime call users,

- Elevate customer service quality

- Assess pricing structure for day, evening, night, and international charges

- Develop and implement robust customer retention strategies

- Review and improve the value proposition of the voicemail plan

- Assess the attractiveness and effectiveness of international plans

Future Projects
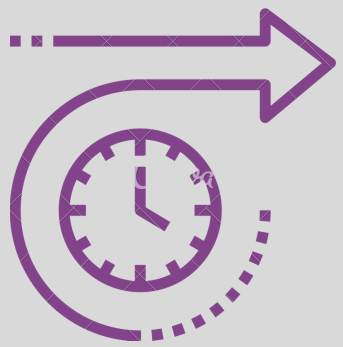
- Use customer data on what specific issues customers calledcustomer service with.

- Employ robust models like XBoost.

- Acquire more data on cell signal patterns across the US,particularly in states with higher churn.

Thank you...

...Q&A