

# **SyriaTel**

## **Customer Analysis**

# Project Overview

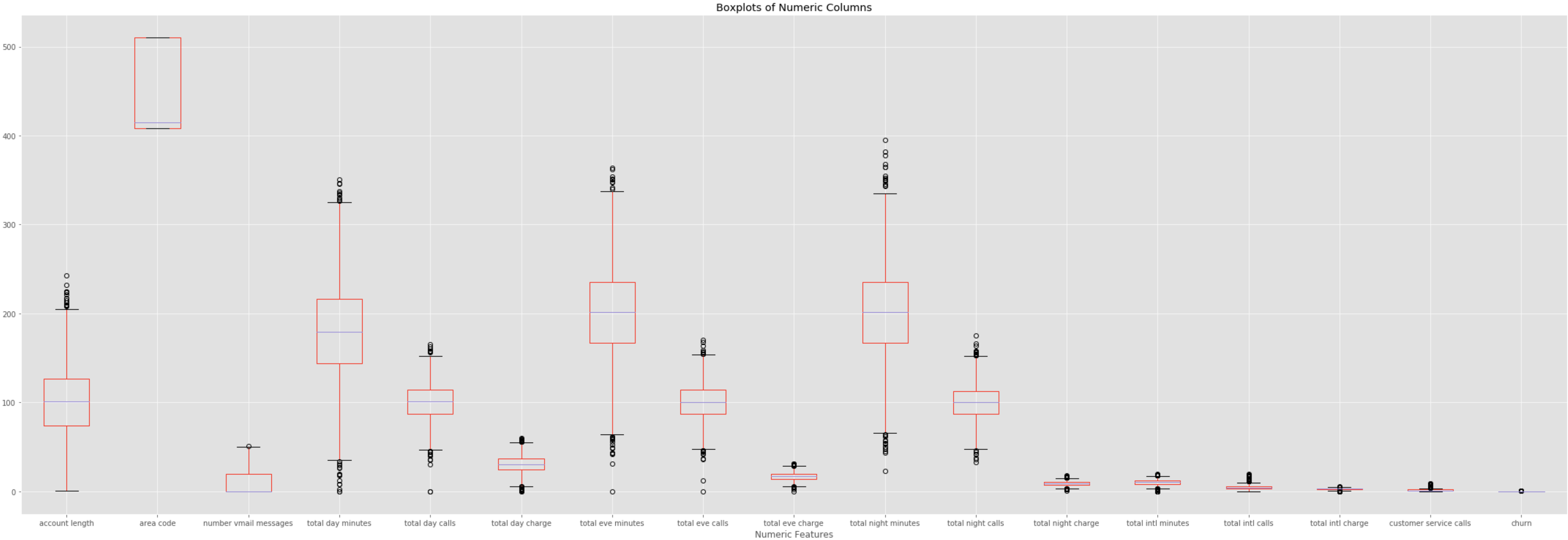


- Leverage SyriaTel customer data to identify underlying trends / patterns in data.
- Understand breakdown of SyriaTel customer base today

- Uncover relationships between existing customer data and churn / customer retention
- Targeted list of at-risk customers to be targeted
- List of customers least-likely to churn may be prime candidates for price raises, etc.

# The Data

## Overview of Customer Base



Total Customer Records:  
3,333

Median Account Length:  
101

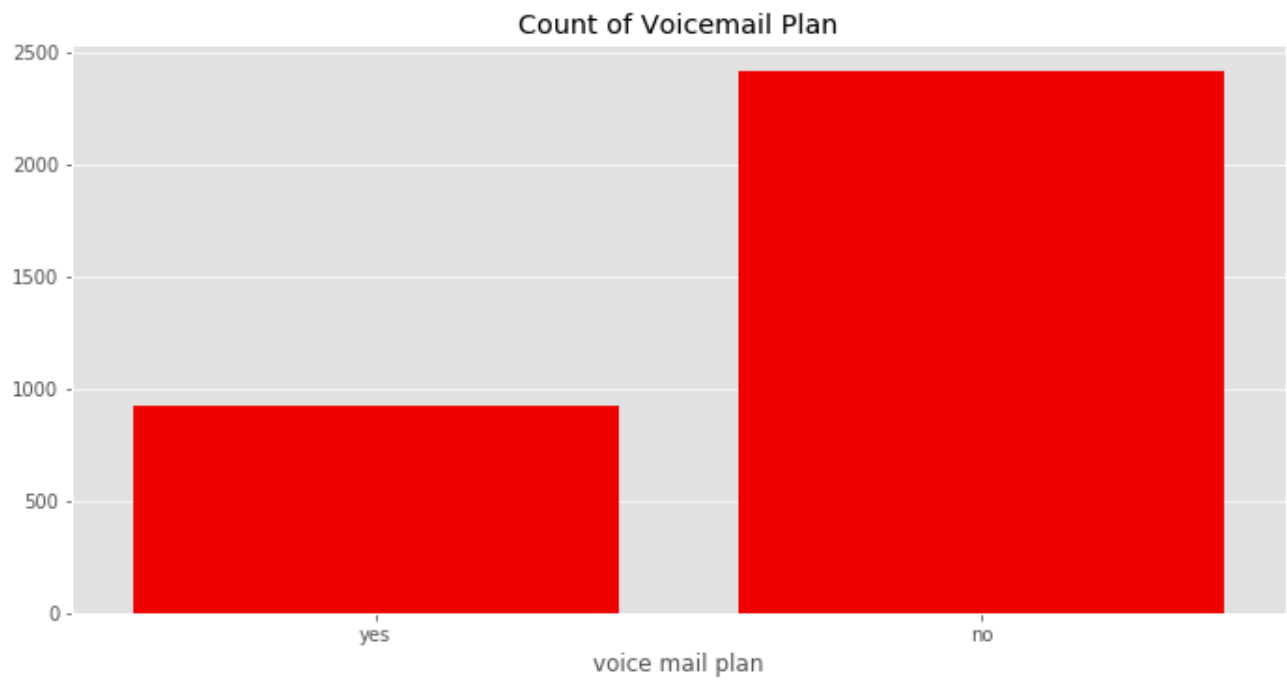
Median Total Day Minutes:  
179.4

Median Total Evening Minutes:  
201.4

Median Total Night Minutes:  
201.2

# The Data

## Overview of Customer Base (Cont'd)

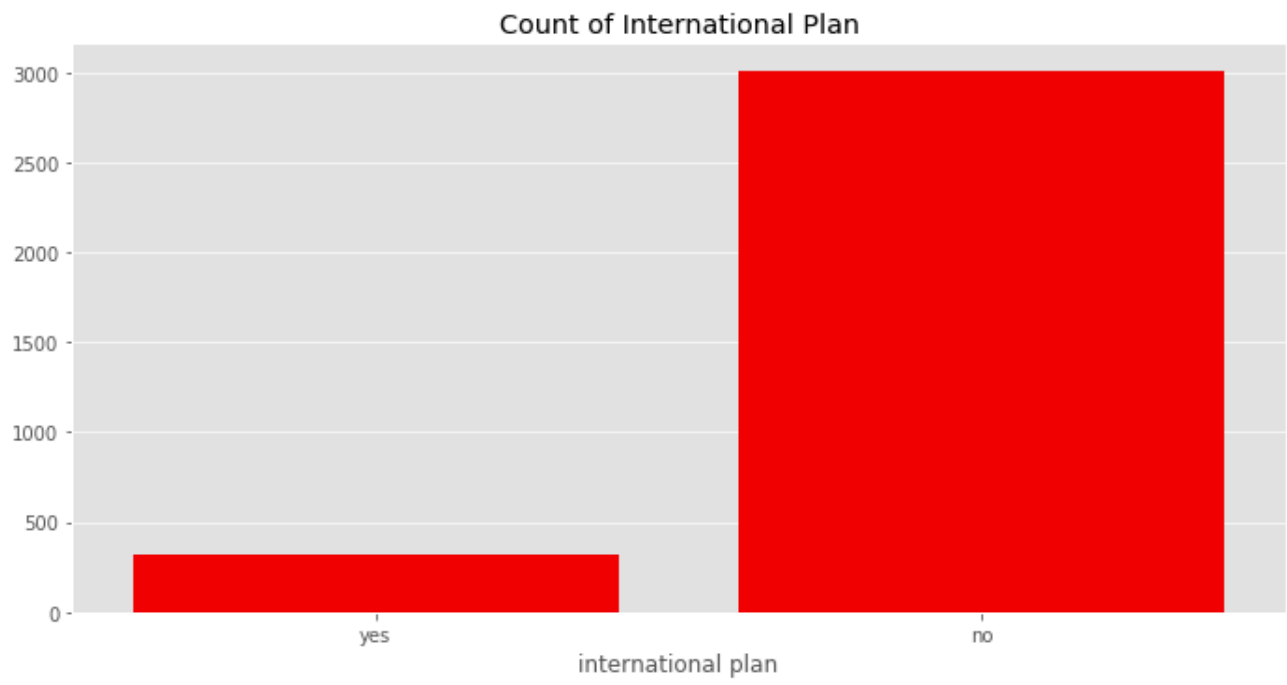


Voice Mail Plan Counts:

voice mail plan	churn	
	False	True
no	2008	403
yes	842	80

Voice Mail Plan %:

voice mail plan	churn	
	False	True
no	0.832849	0.167151
yes	0.913232	0.086768

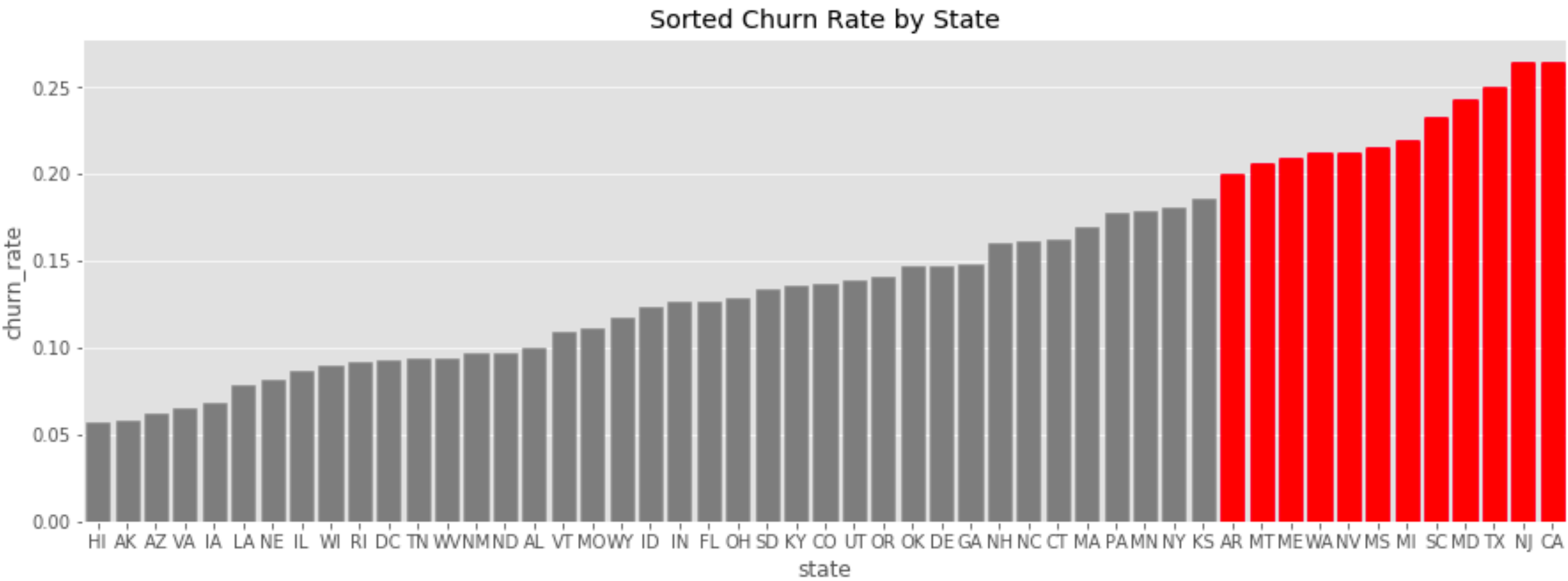
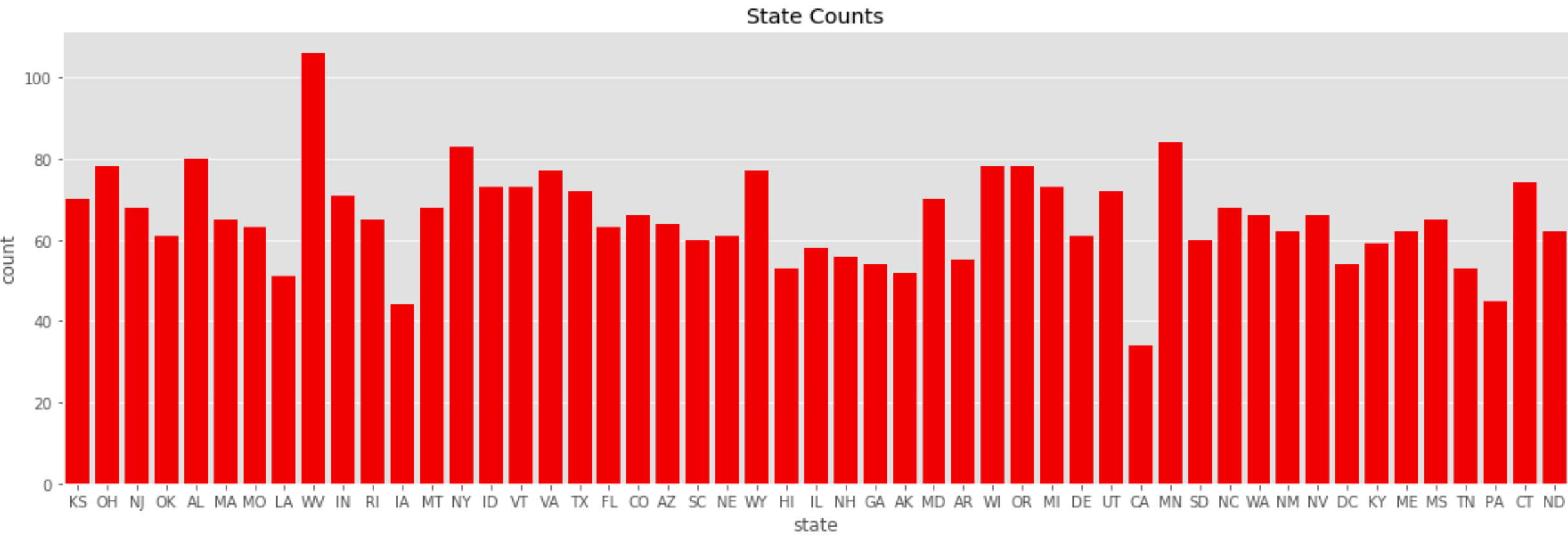


International Plan Counts:

international plan	churn	
	False	True
no	2664	346
yes	186	137

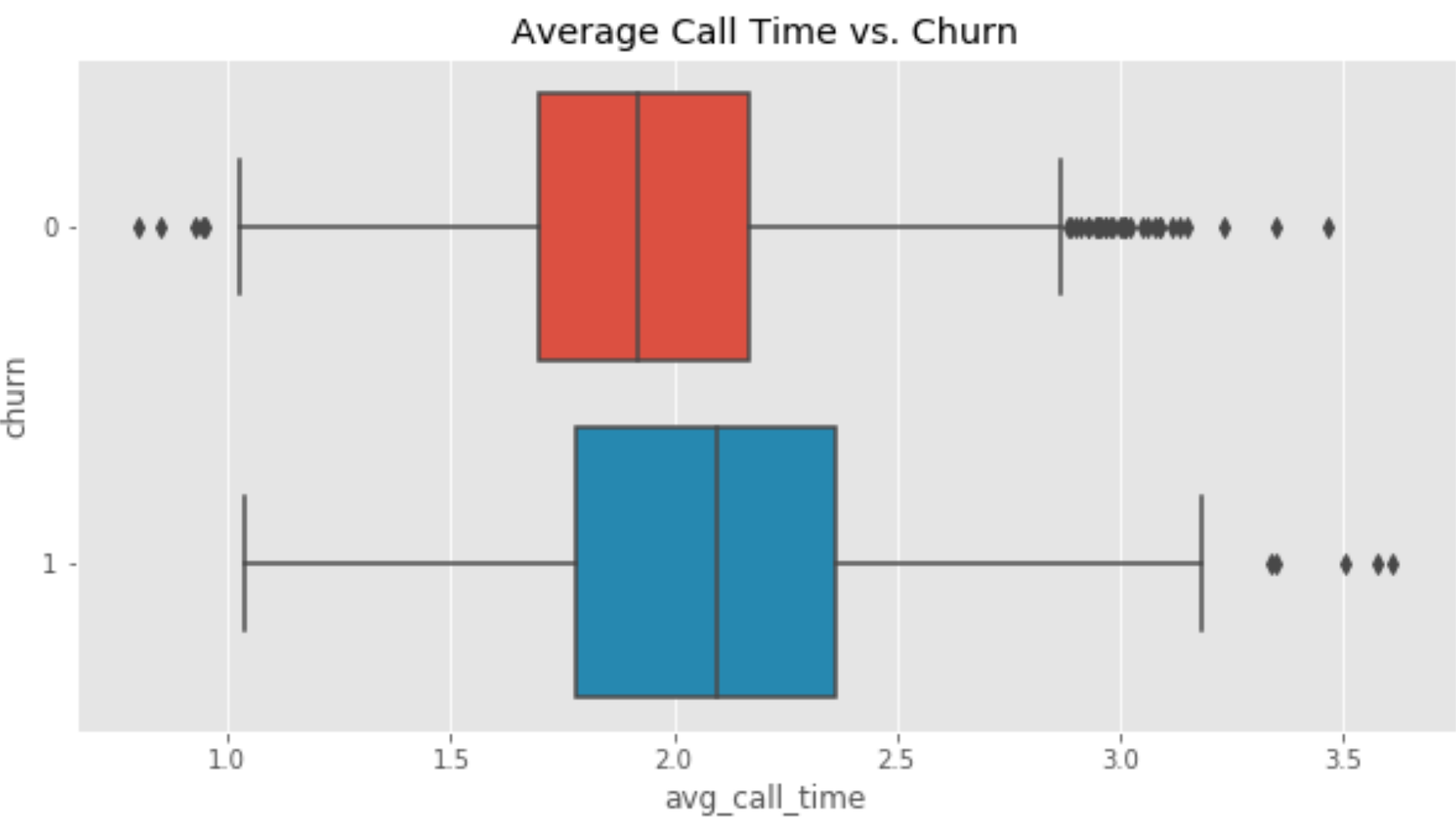
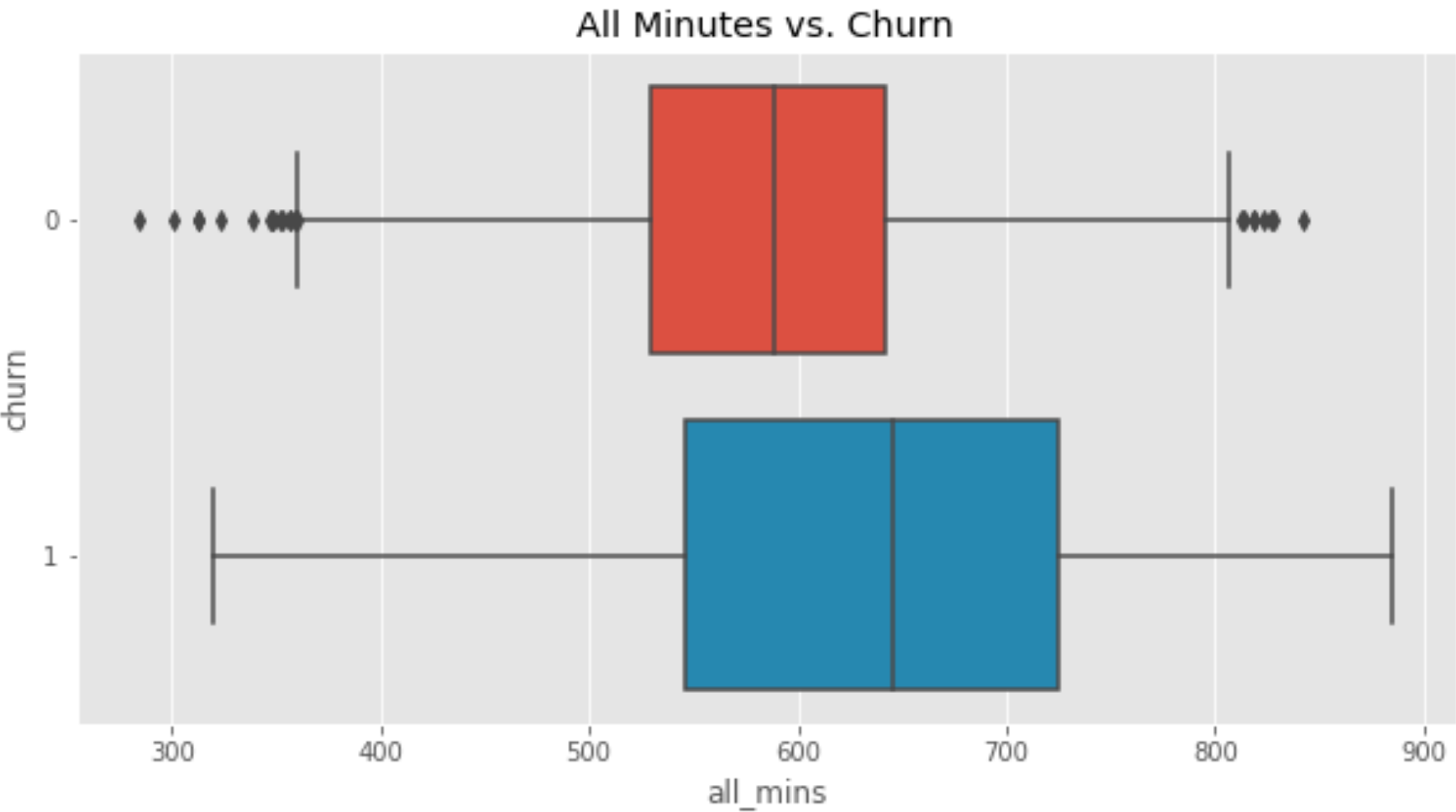
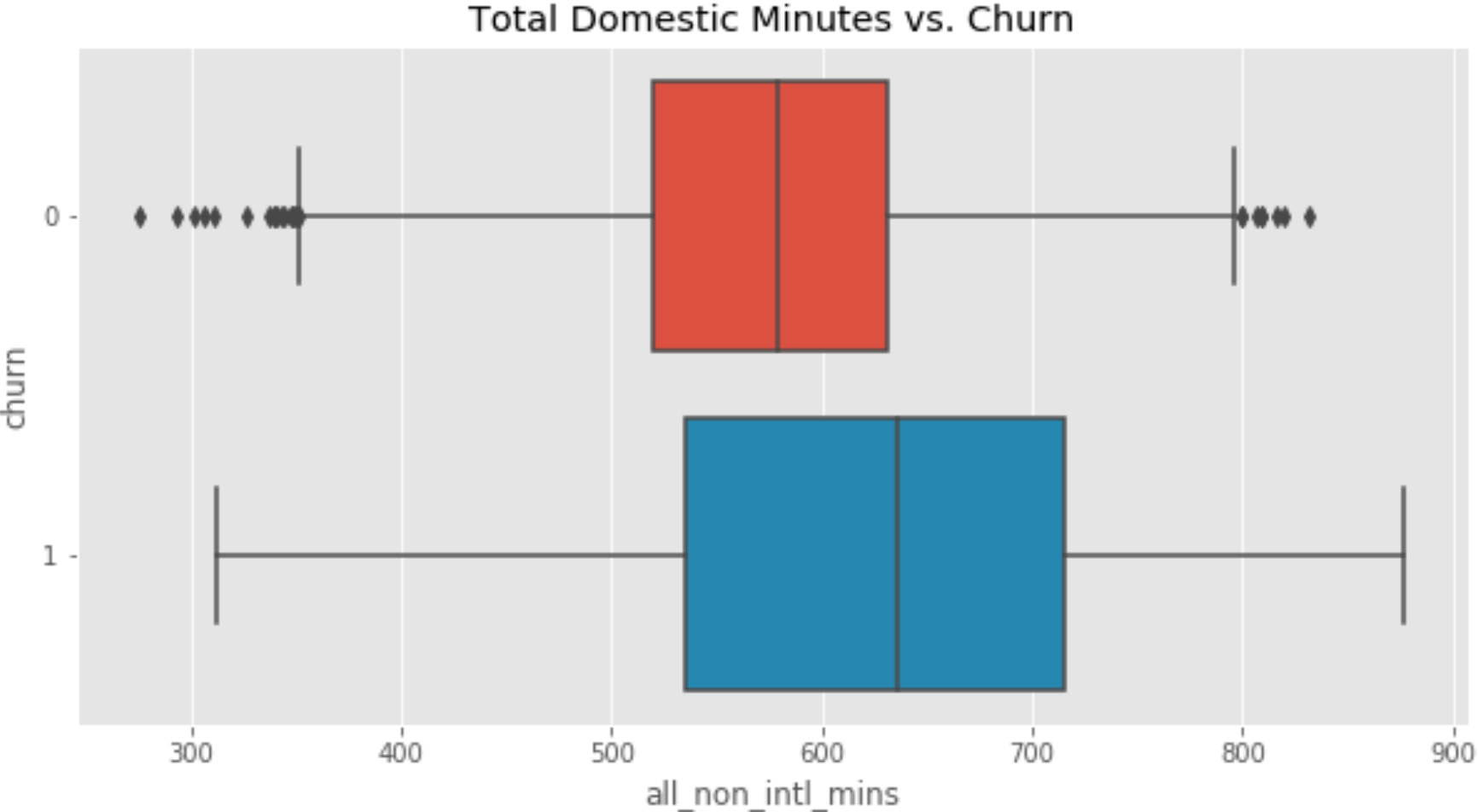
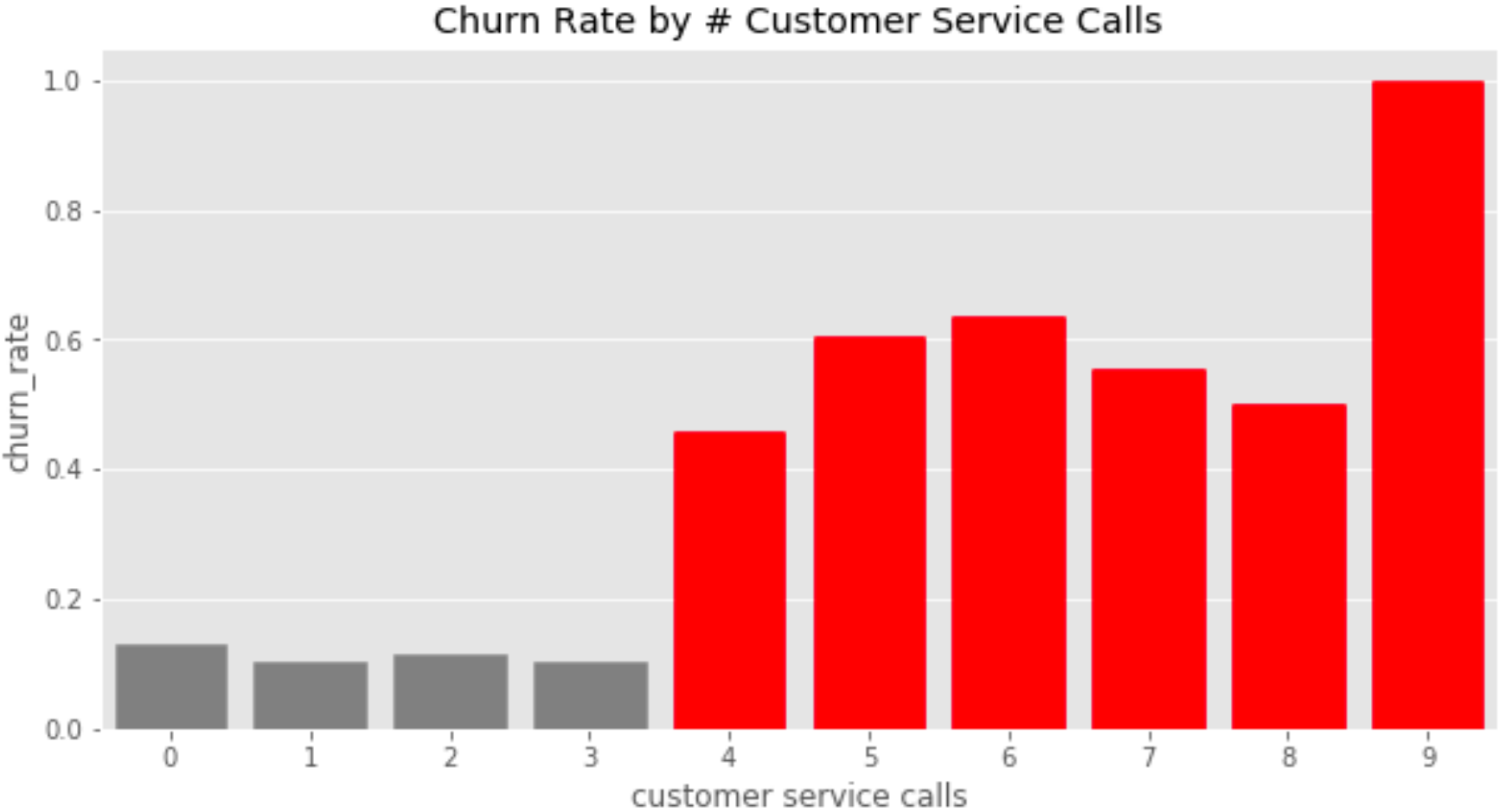
International Plan %:

international plan	churn	
	False	True
no	0.885050	0.114950
yes	0.575851	0.424149



# Data

## Trends and Relationships

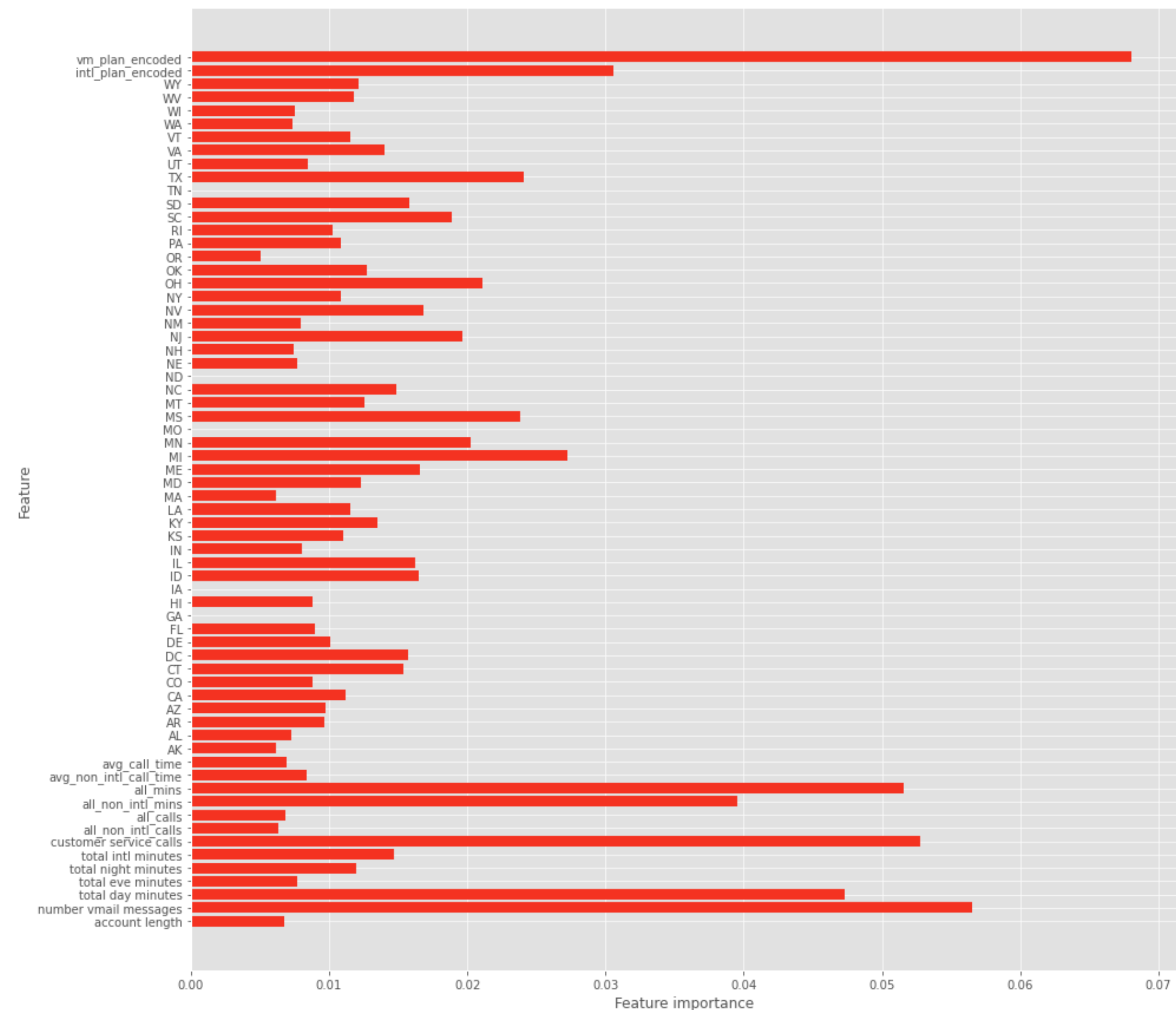
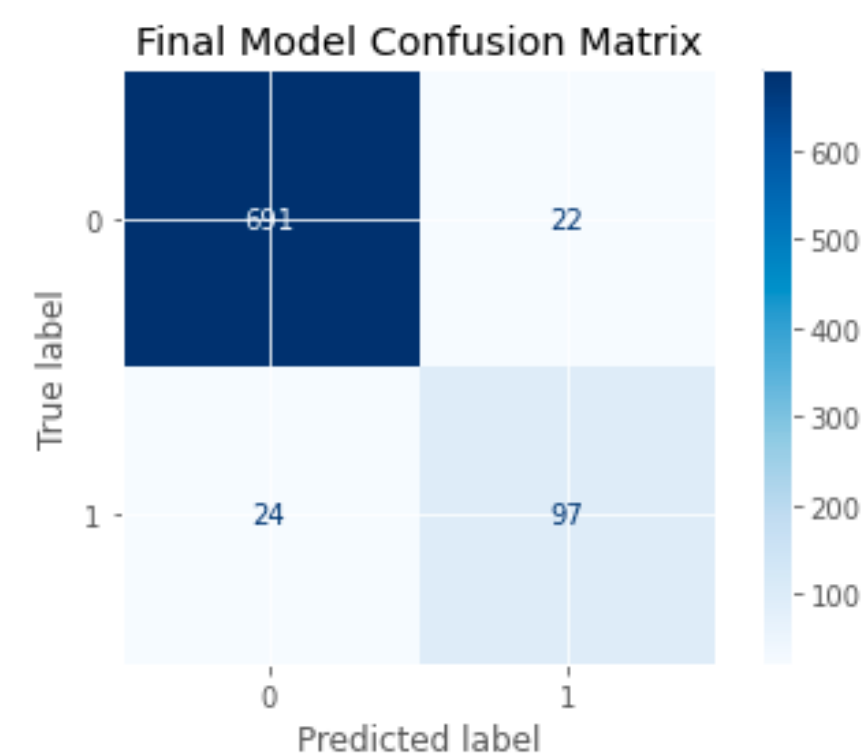


# Evaluation

## Final Model Performance & Feature Importance

Recall:	80%
Precision:	81%
Accuracy:	94%

Recommendations
<ul style="list-style-type: none"><li>• Use generated target list for at-risk customer outreach and targeted promotions</li><li>• Consider raising prices / implementing additional programs to increase revenue and rev per user on these customers</li><li>• Closely monitor customers with more than 2 customer service calls</li></ul>



# Additional Areas for Future Work

- Add time element to data to understand when customers will churn

- Collect additional data fields from customers to improve predictive performance (reasons for churn if available, etc.)

- Compare cellular signal strength with churn data / investigate competitive options in similar regions

# Thank you