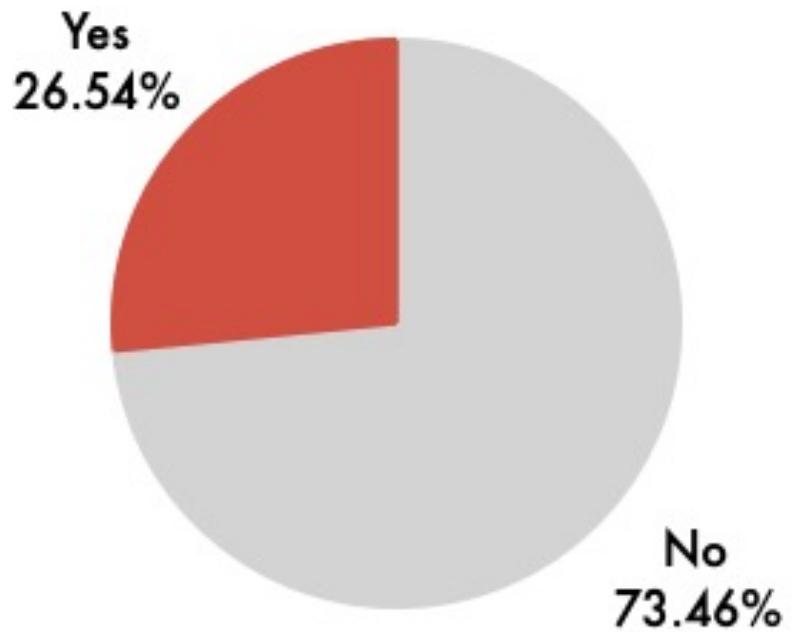




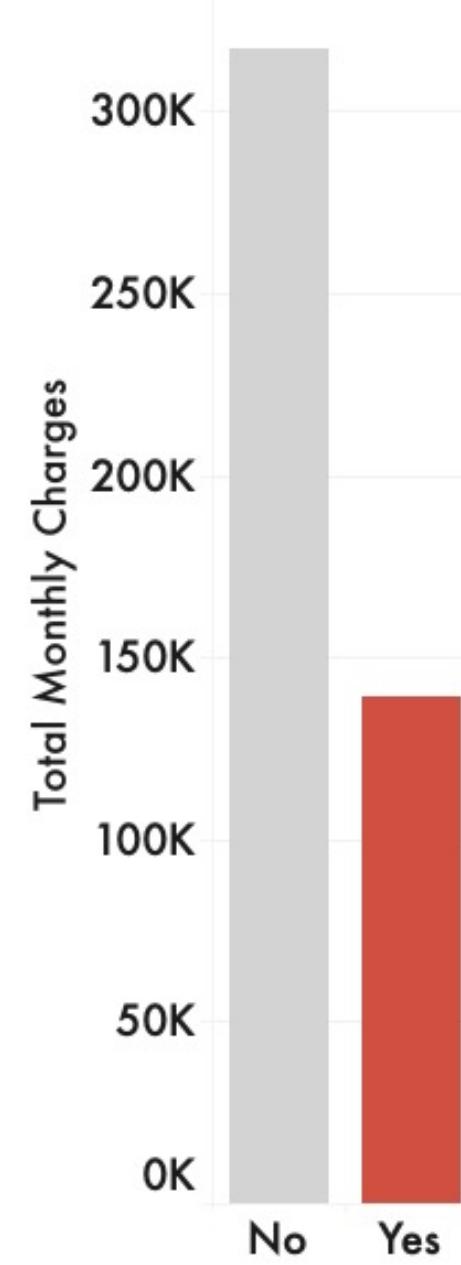
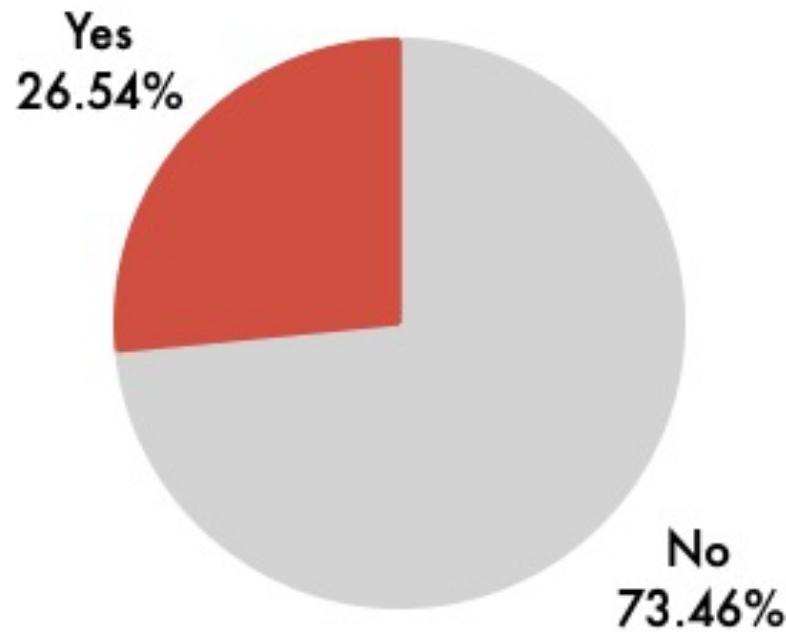
# Customer Churn Prediction

Cecilia Bell

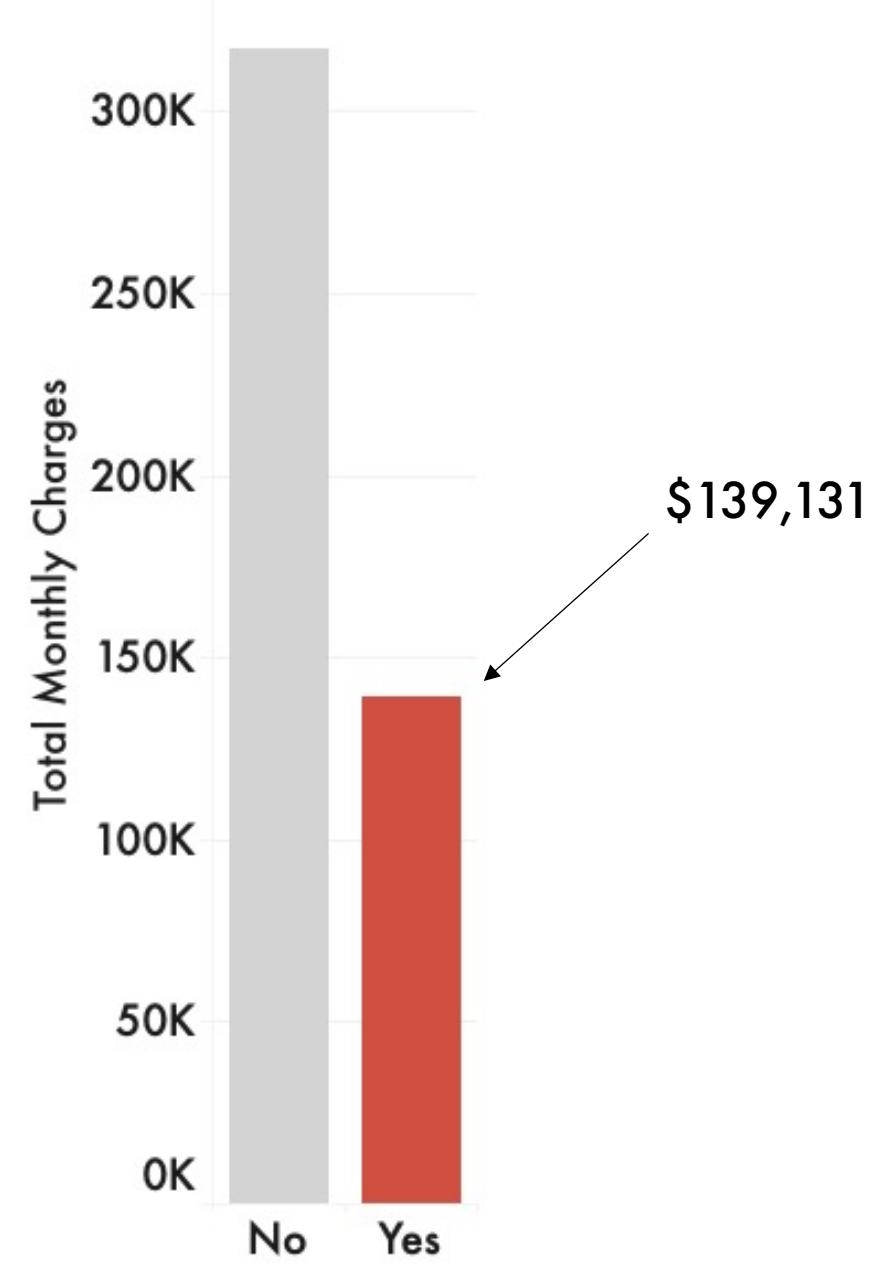
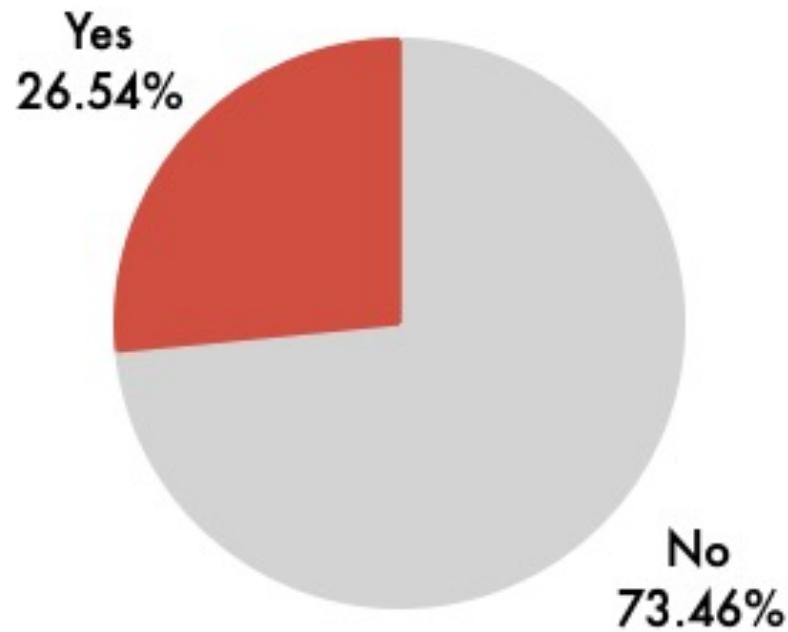
# Problem Churn

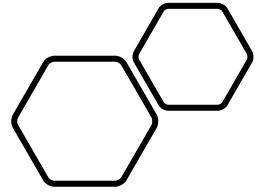


# Problem Churn



# Problem Churn





# Solution



# Methodology



Exploratory data analysis



Build model



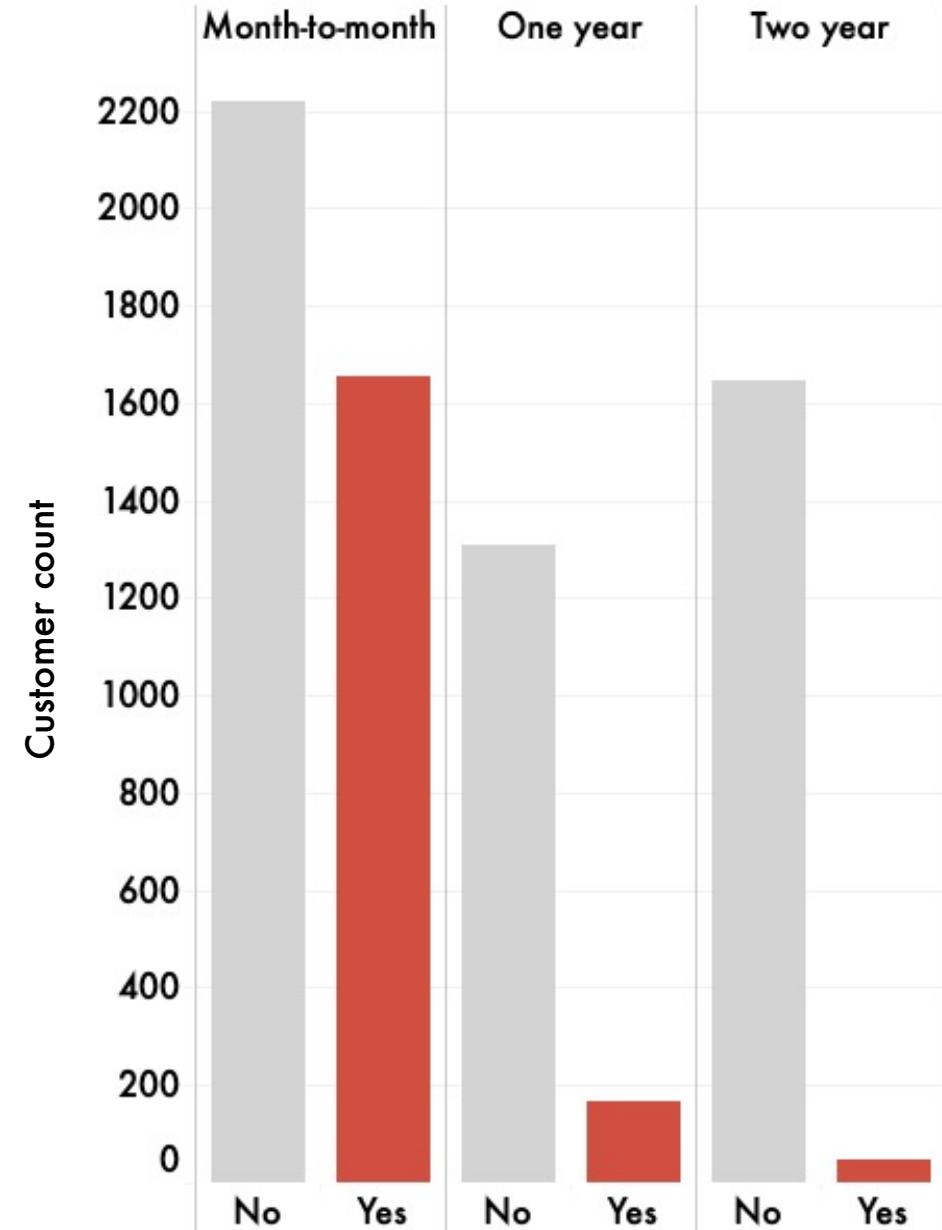
Expand and refine model



Implement model

# Insights

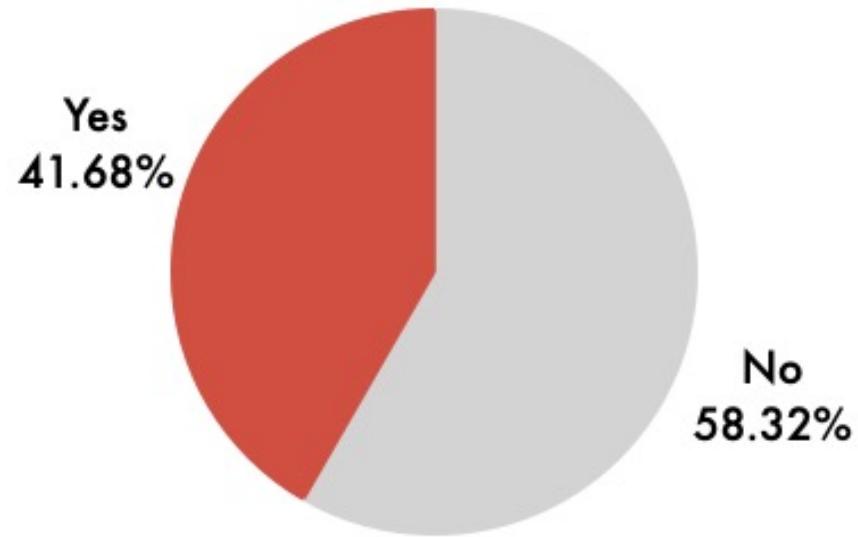
Customers on month-to-month contracts were more likely to churn



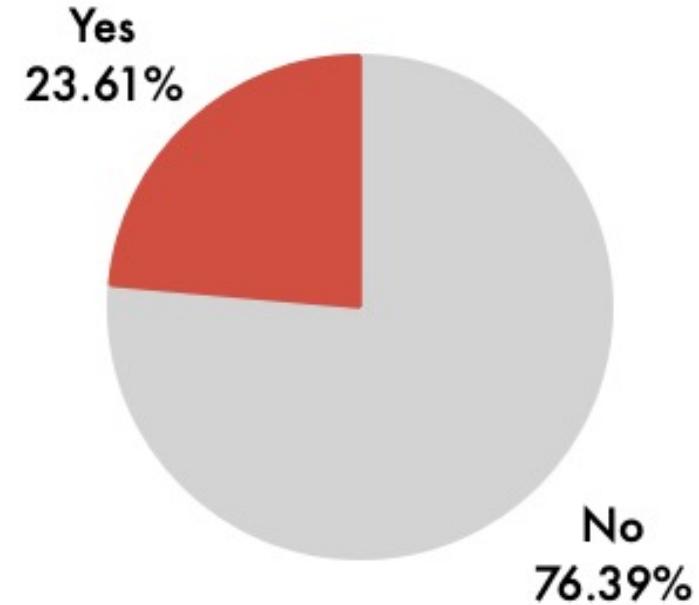
# Insights

Seniors were more likely to churn

Senior



Not senior





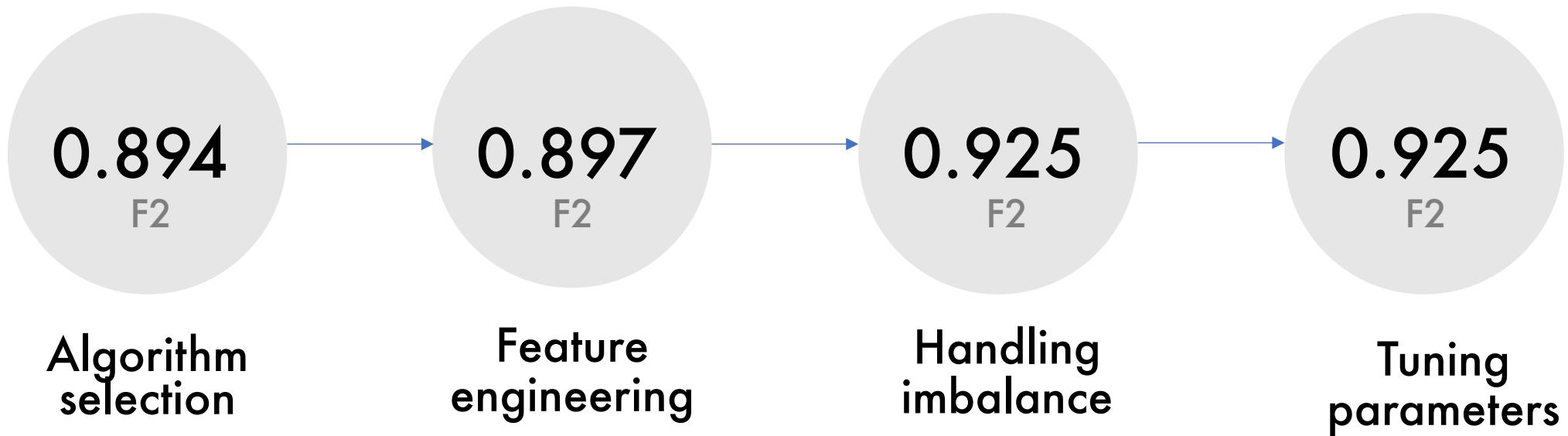
# Results

## Final Model

- Algorithm: LogisticRegression
- Features: 28
- Parameters:
  - Class weight: 5:1
  - C: 10
  - Penalty: L1
  - Solver: liblinear

# Results

## CV F2 Score



# Results

## Test Scores



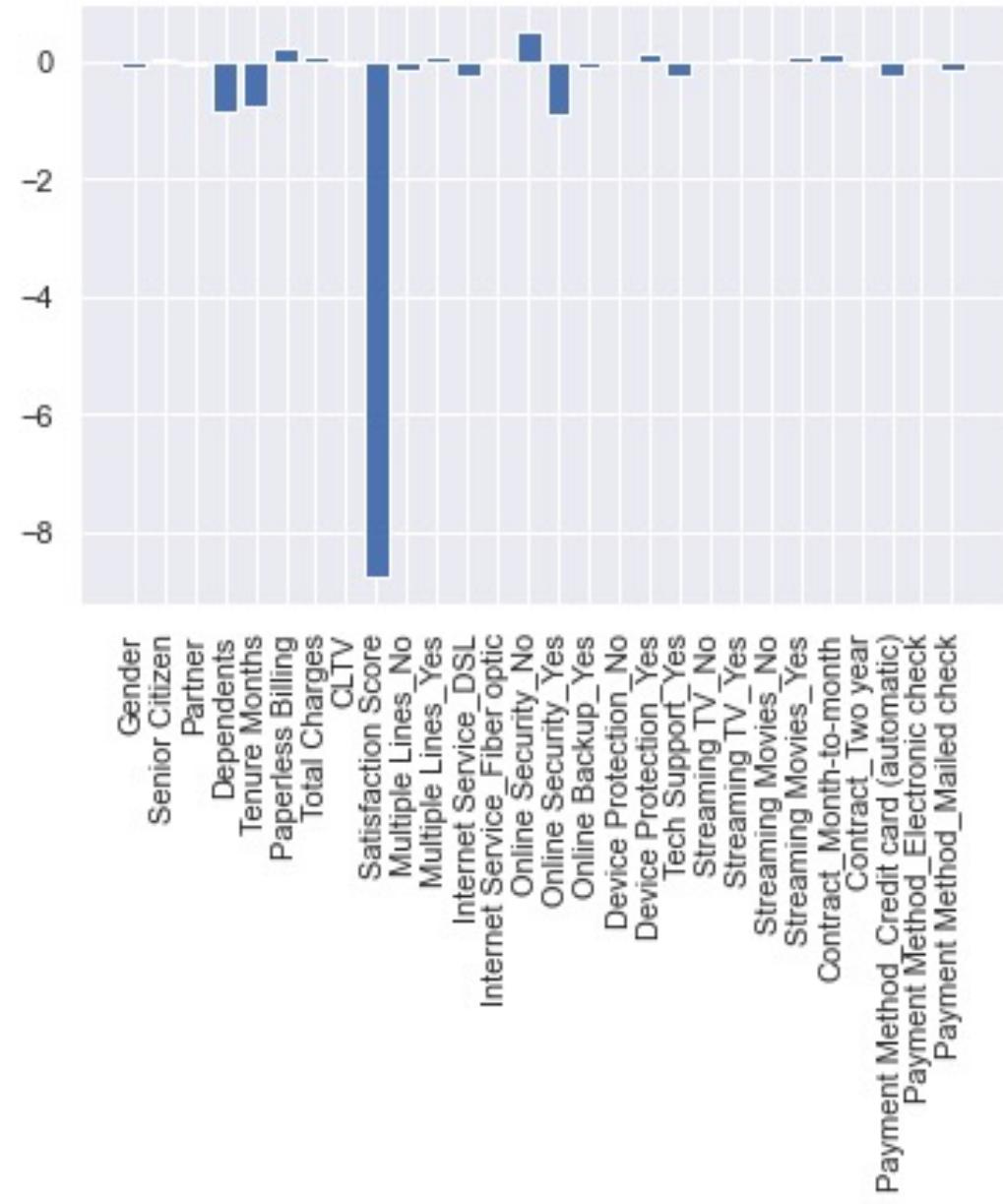
0.957  
Recall

0.799  
Precision

0.921  
F2

# Results

## Feature Importance



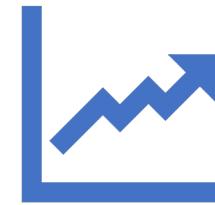
# Conclusion



Collect satisfaction  
scores



Target seniors



Review services  
correlated with churn

# Thank you

