Churn Rate in SyriaTel: A Telecom Company

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Agenda

- Business Problem
- Data
- Model
- Recommendations
- Next Steps

Business Problem

- SyriaTel has been losing customers in the previous months

- Wants to decrease customer churn and retain customers

- Determine the best predictors to decrease customer churn rate

Data

- Data available from SyriaTel's database online

- Data was collected from 3333 customers

- Data was collected from all 50 states, including the capital (D.C.)

Churn Rate

- False means that the customers did not leave

- True means they have left

- 2850 customers have stayed (85.51%)

- 483 customers have left (14.49%)

Customer Churn Rate
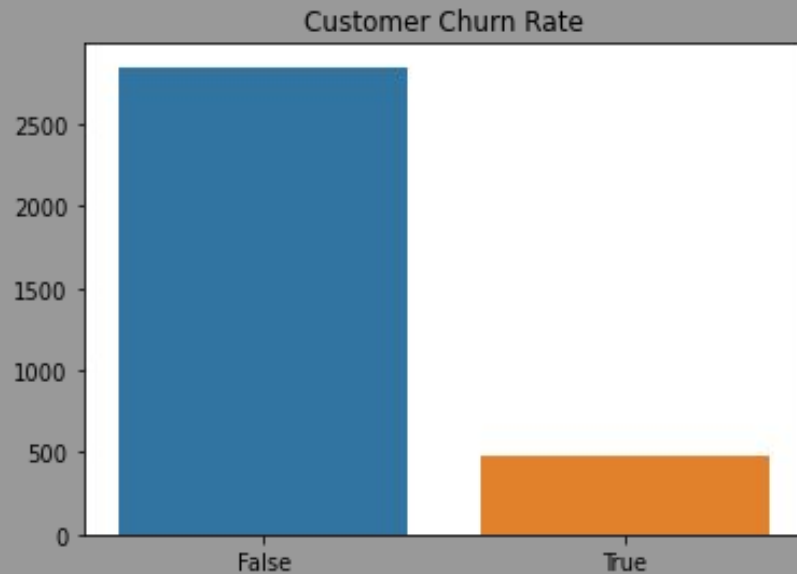
Churn Rate by Variables

- Took the churn rate of the numeric variables

- Excludes categorical variables :
    - International Plan
    - Voicemail Plan
   - Area code
    - State

Categorical Churn Rate

- Shows churn rate between customers with voice mail plan

- 403 people with no voice mail plan decided to leave (16.72%)

- 80 people with no voice mail plan decided to leave (8.68%)

Customer Churn based on Voice Mail Plan
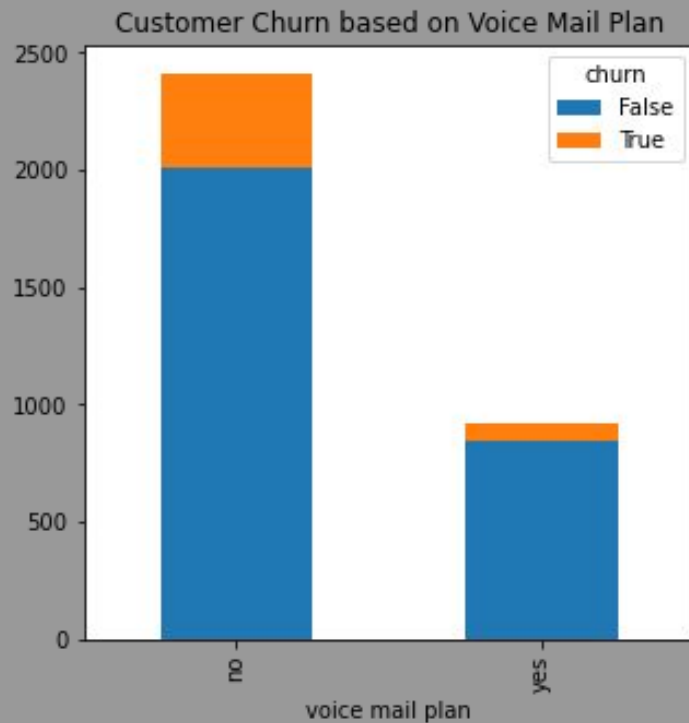
Churn Rate by Numeric Variables

- Represents the frequency of customer service calls

- Churned customers tend to have a higher number of service calls

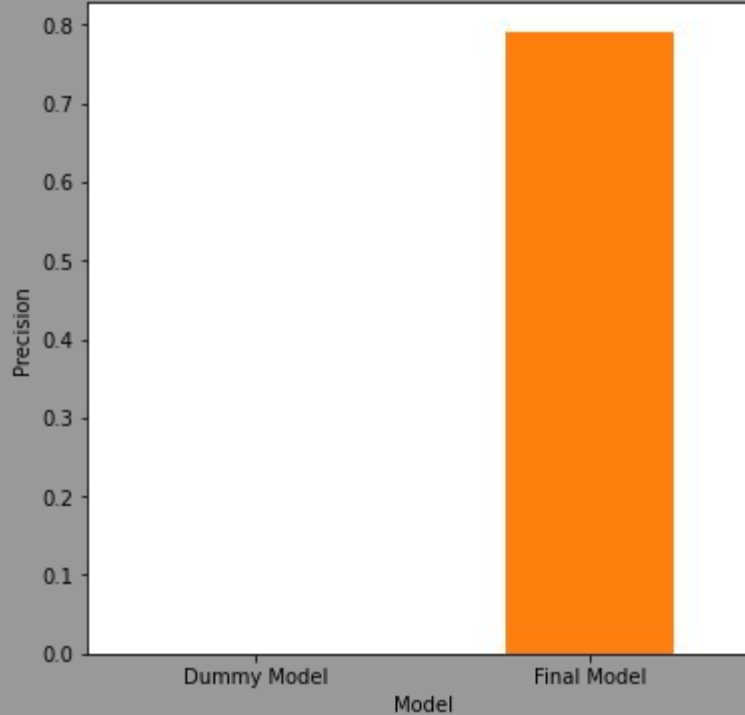- Customer service may be a factor for customer retention

Customer Service Calls by Churn
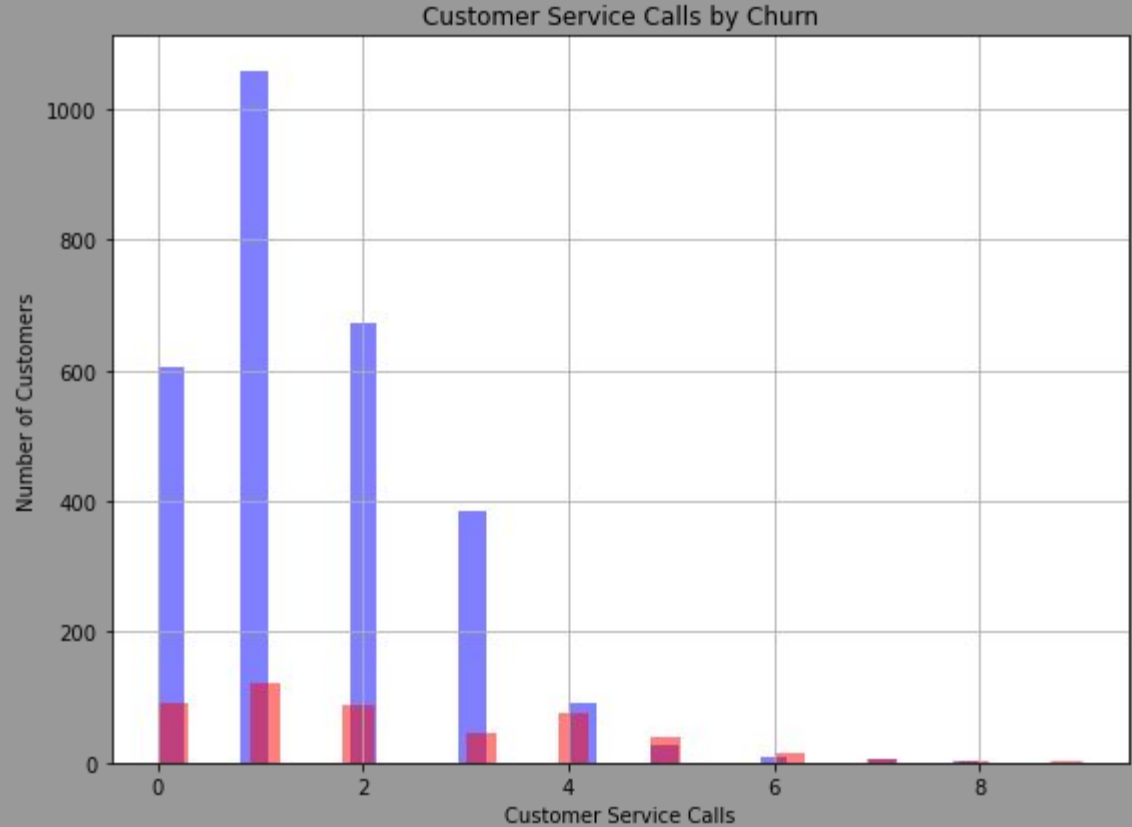
Model

- Compared accuracy, precision, recall, and f1 score

- Looked more at the precision score

Comparison of Dummy Model and Final Model
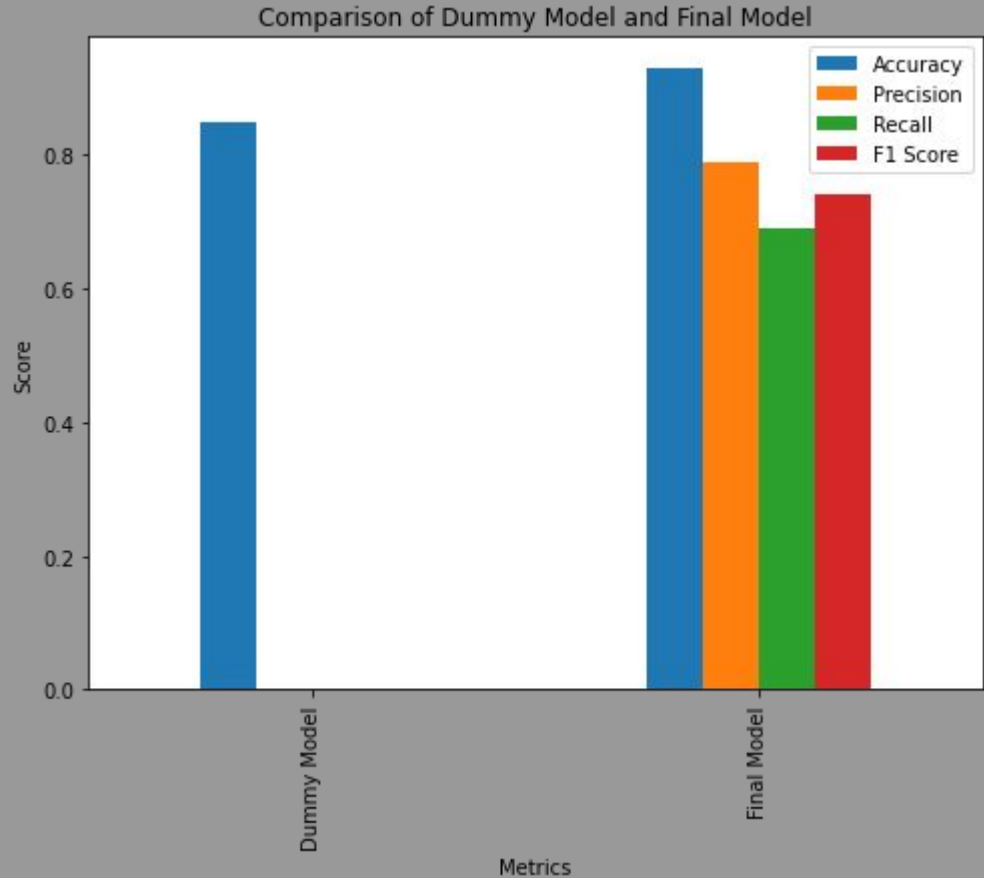
Model

- Drastic increase in precision from the dummy model (79%)

- Final model identifies more customers likely to leave SyriaTel

Comparison of Precision Scores for Dummy Model and Final Model

Recommendation

- Improve customer service as customer service calls were a significant predictor for churn rate
- Improve product offerings as customers who had a voicemail plan were less likely to leave
- Improve customer incentives as customers who stayed with Syria Tel for a significant time were less likely to leave

Next Steps

- Run further models for a better scores
- Include further categories that were not used
    - Social media behavior
    - Purchase behavior
    - Competitor analysis

Thank You!

Any questions, please contact me at:

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For overview of analysis and presentation, please click here.