



Telco Customer Churn

Churn Classification Modeling

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Business Problem

- Analyze data from customer churn at Telcom
- Determine the best metrics to predict customer churn
- Predict behavior to retain customers
- Make Recommendations to Telcom to prevent churn



Data

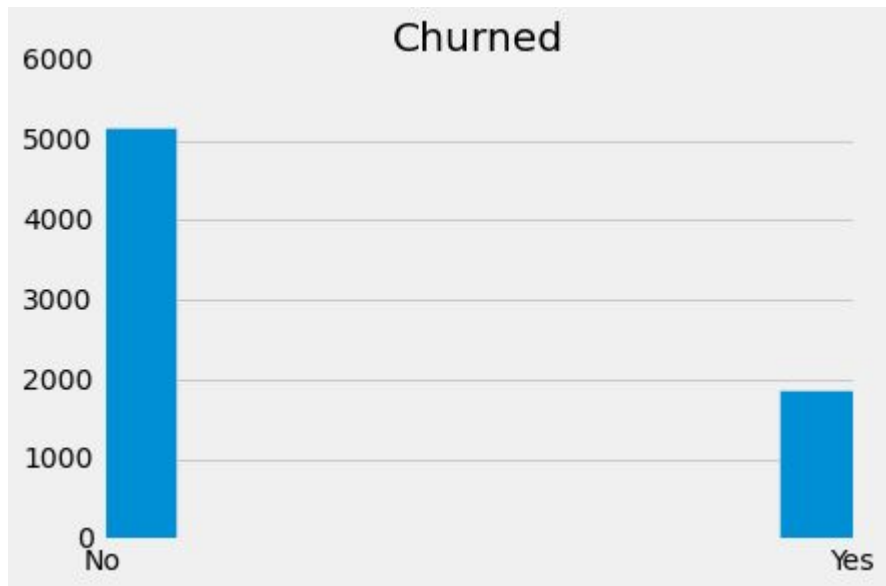
- Available from Telco Customer Data
 - Customers who left within the last month – the column is called Churn
 - Services that each customer has signed up for
 - Customer account information
 - Demographic info about customers
- 7,043 Customer Records
- 2017-Present

Class Distribution

- Building Models to Predict Customer Churn

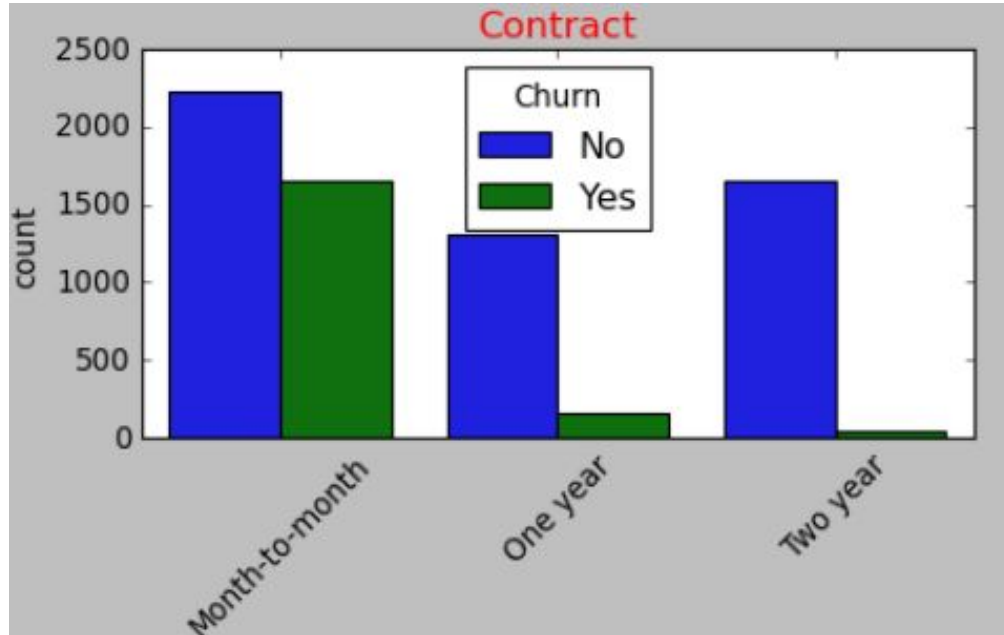
Yes - 1869 data points

No - 5163 data points



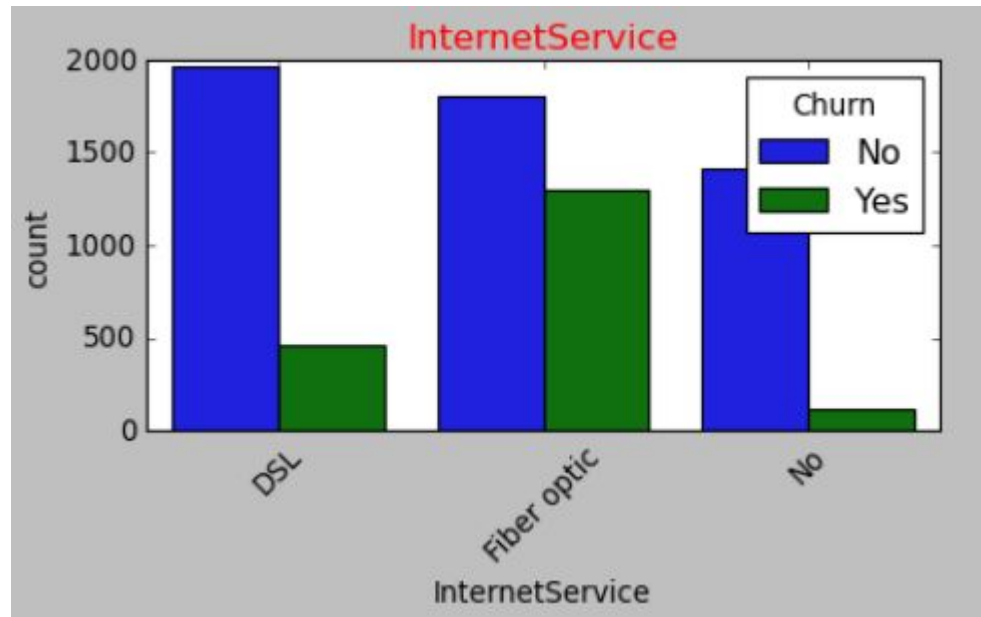
Findings

- Customers who are month-to-month are more likely to churn



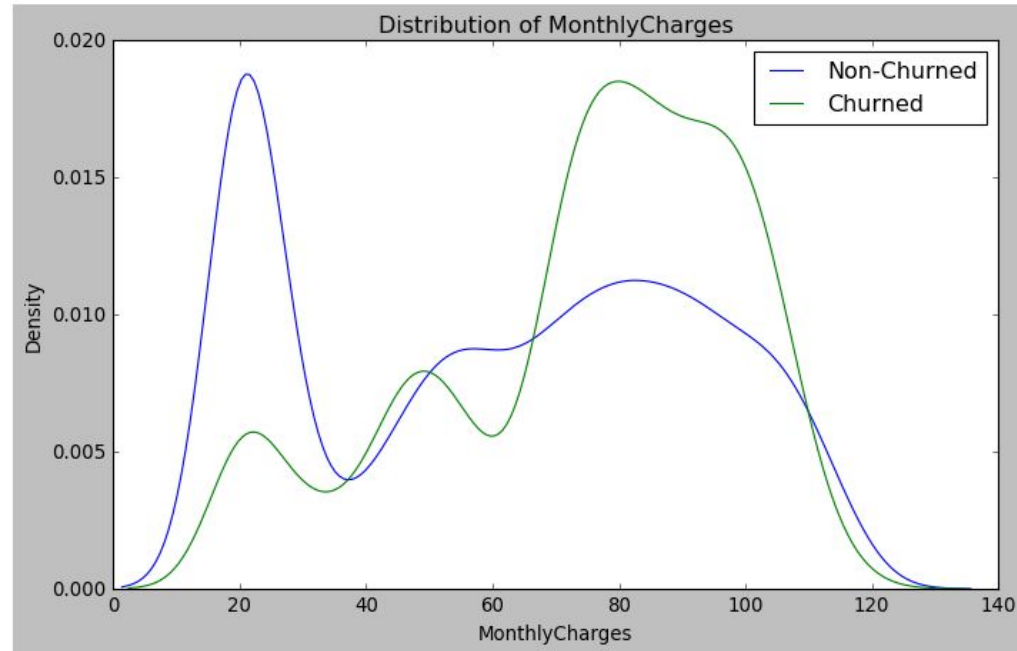
Findings

- Customers who sign up for fiber optic internet are more likely to churn



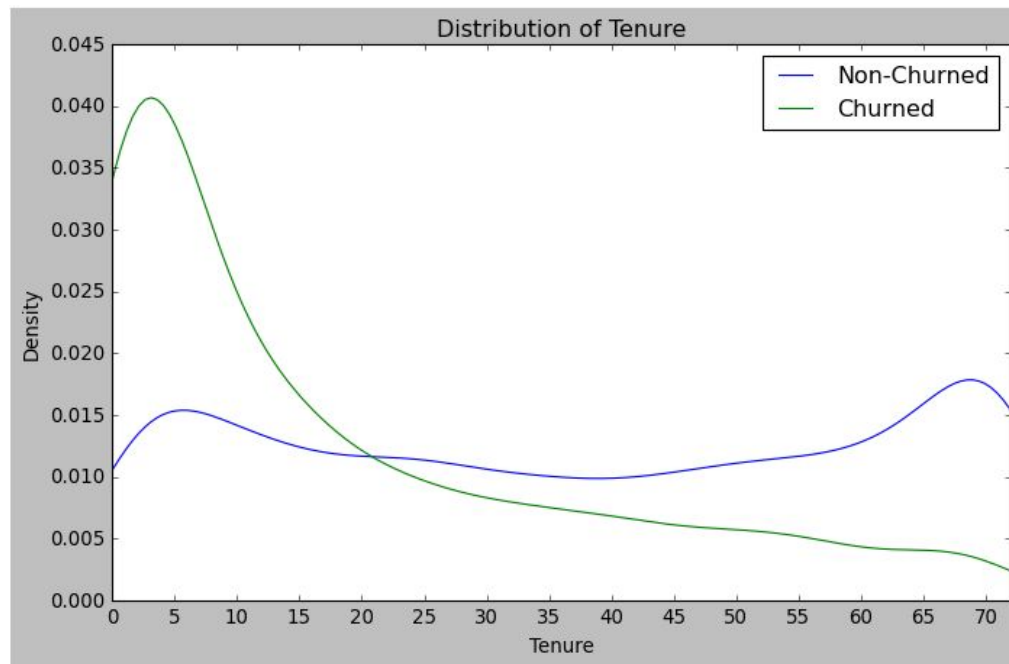
Findings

- Customers churn less with a lower monthly payment



Findings

- Customers churn less after staying with Telco for 5+ months





Modeling



EDA

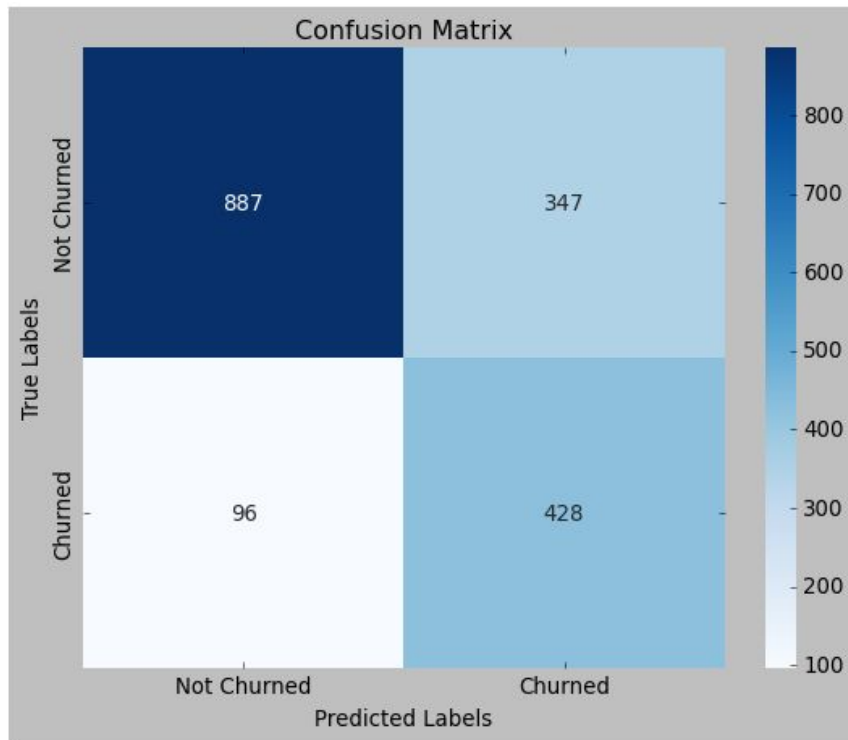
Preprocessing

Modeling

Model Evaluation

Recommendations

Model Performance



Recall

For class Not Churned: 72%

For class Churned: 82%



Recommendations

- Minimize month to month contracts
- Maximize two-year contracts
- Minimize customers who use fiber optic internet.
- Maximize tenure of customers(over 5 months)
- Keep the monthly charge under 40 dollars



Future Work

- Telco can be observed as new services offered.
- Additional variables to consider:
 - Location
 - Type of home
 - Cost per customer
 - Lifetime value of customer



Thank you!