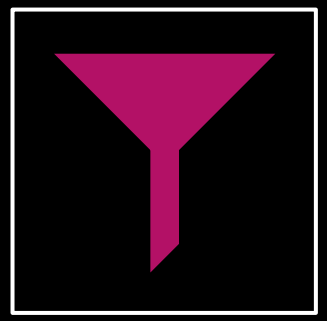

Telco Customer Churn Analysis
and Prediction

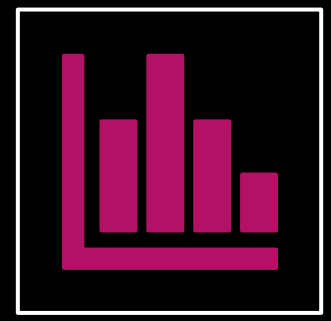
Contents

Understanding Customer Churn



Customer churn: The rate at which customers stop doing business with a company

High churn rates lead to decreased revenue and increased customer acquisition costs

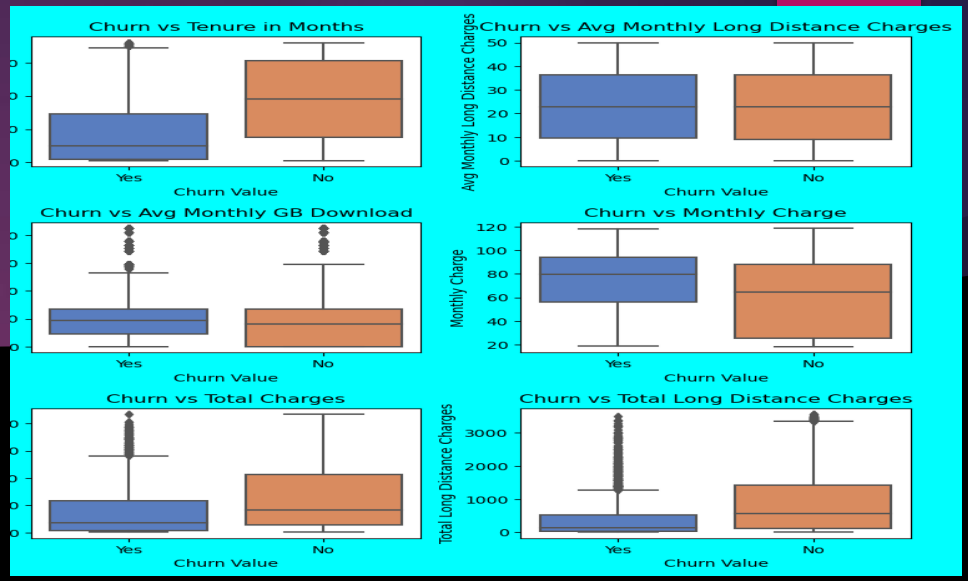


Predicting churn can help companies take proactive measures to retain customers

Data Overview

- The dataset used for Telco Churn Analysis contains information on customers of a telecom company who have either churned or not churned.
- The dataset includes 7,043 observations and 57 variables. The variables include demographic information such as age, gender, and income, as well as service-related information such as tenure, contract type, and monthly charges.
- In addition to these variables, the dataset also includes information on customer behavior such as the number of calls made, the number of customer service calls, and whether the customer has multiple lines or additional services.
- This rich set of variables provides ample opportunity for analysis and modeling of customer churn behavior.

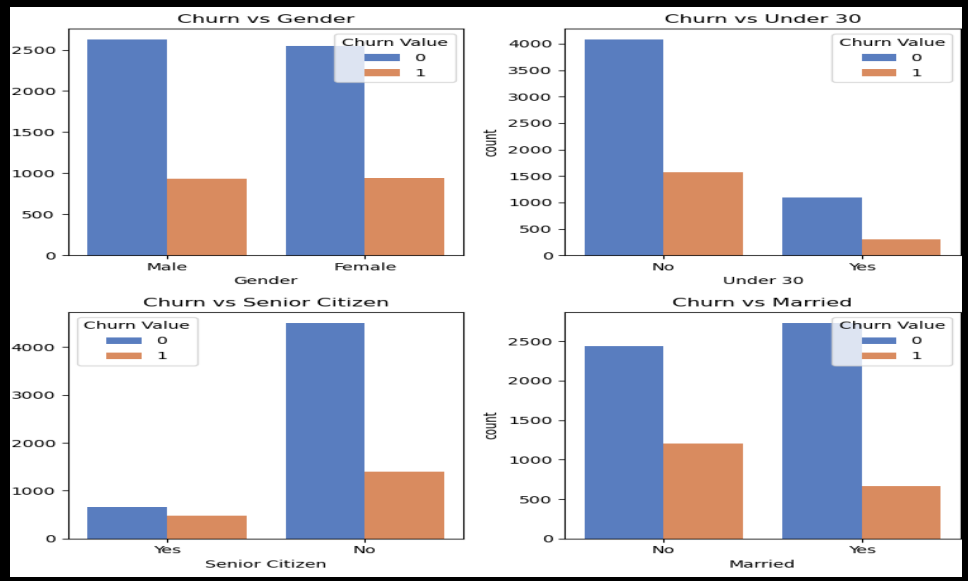
Exploratory Data Analysis



CONTRACTS: Customers with MONTHLY contracts and high monthly costs churn more

CUSTOMER DEMOGRAPHY: Young or Unmarried customers are more likely to churn

PAYMENT MODES: Customers paying in Electronic Modes are High Churners

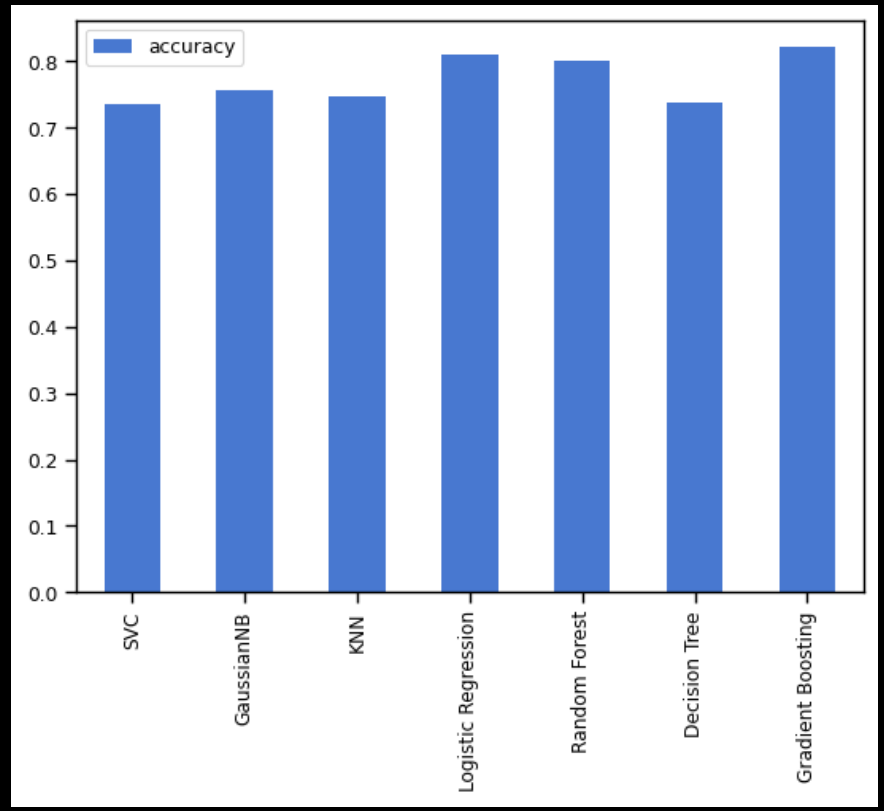


Machine Learning Models

Empowering decision-making with a lineup of predictive models to predict Customer Churn

Explored several Models like Logistic Regression, Decision Trees, Random Forest, XGBoost, etc to arrive at the best Model

Gradient Boosting outperformed other models and delivered the most accurate customer churn predictions



Model Performance

Accuracy

The Machine has a commendable accuracy of 82%, making reliable and precise predictions in its task.

Precision

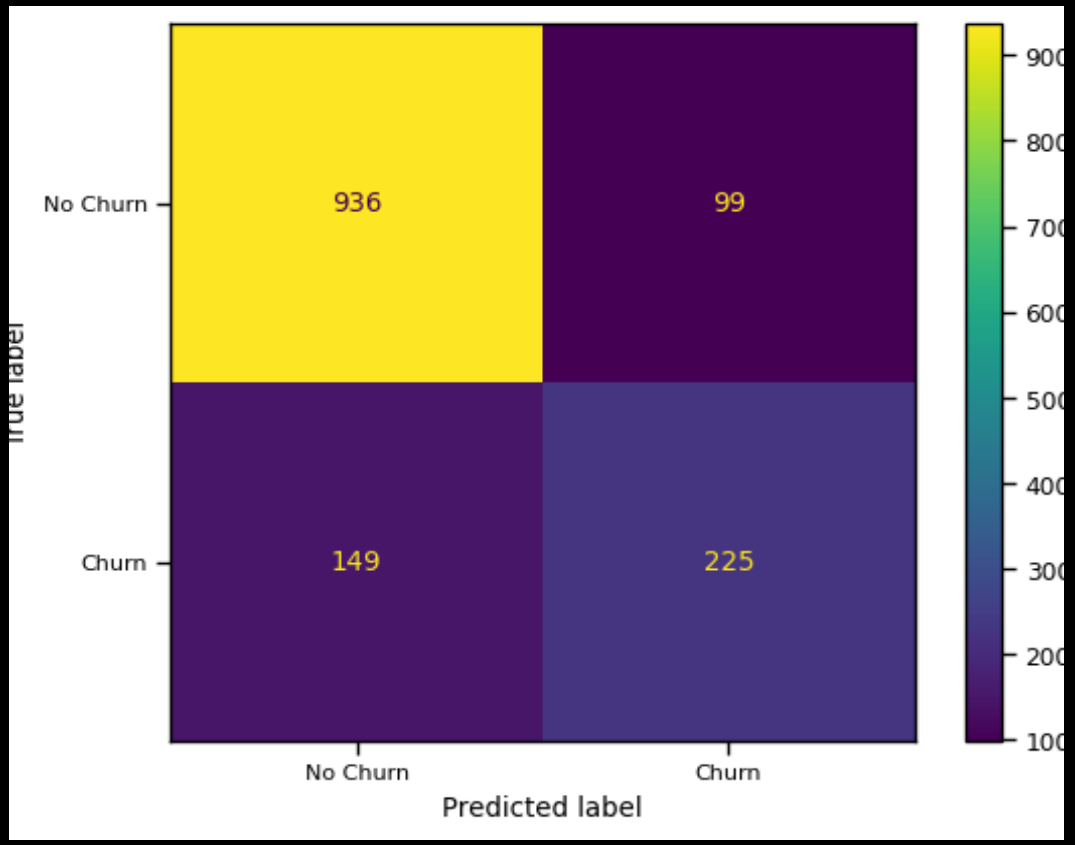
It has an impressive precision of 82%, precisely identifying a substantial portion of true positive instances in its predictions.

Recall

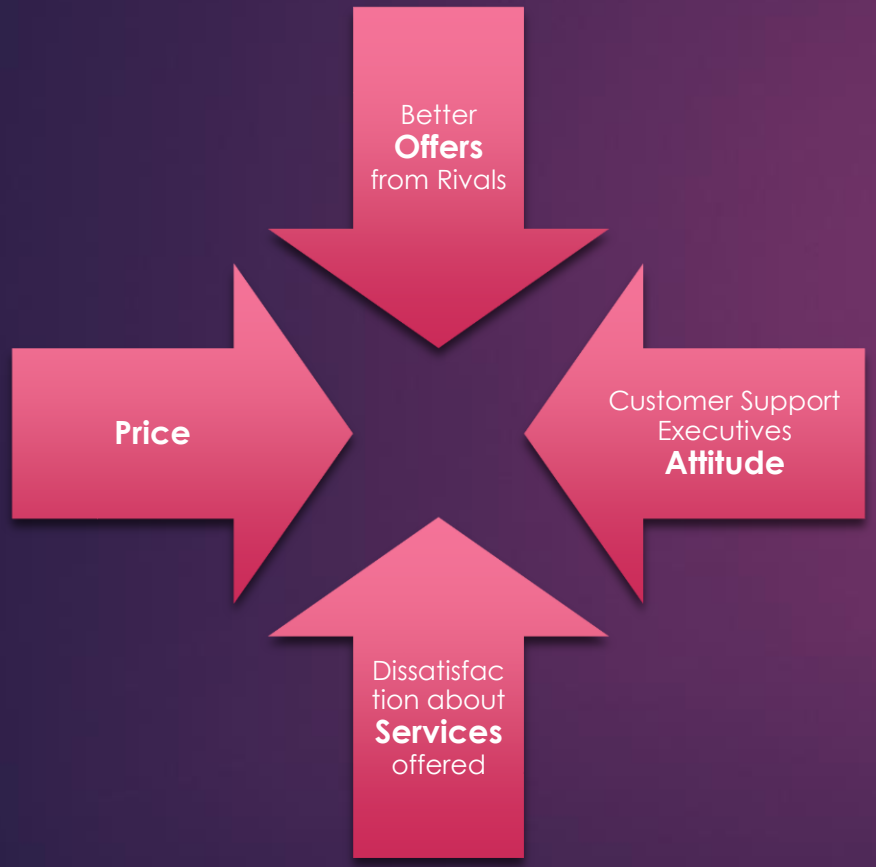
The Machine captures a significant portion of actual positive instances in its predictions

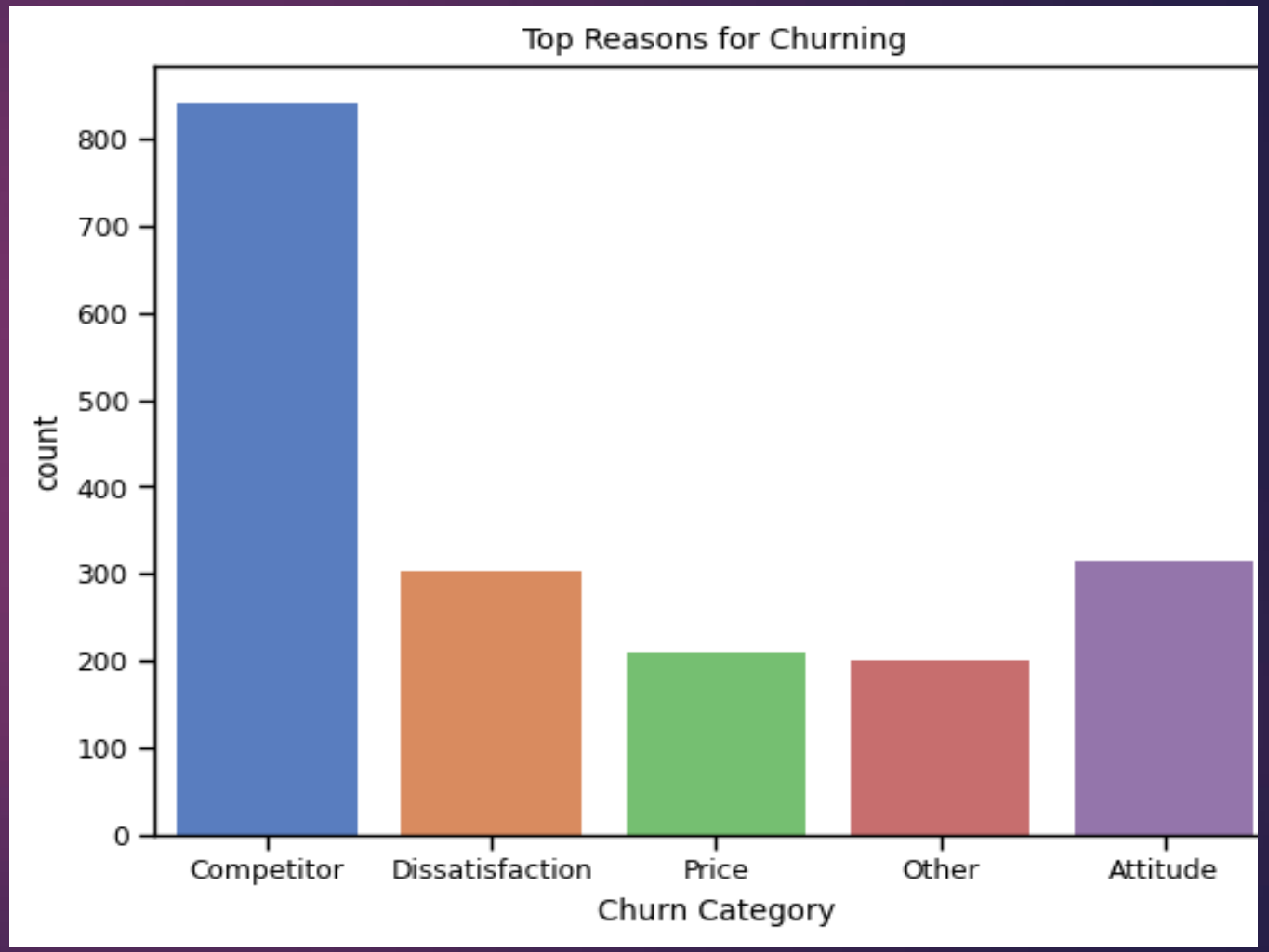
Highlight

The machine's predictions are incredibly accurate and reliable across all aspects!!



Why Churn??


Better
Offers
from Rivals
Price
Customer Support
Executives
Attitude
Dissatisfac
tion about
Services
offered


Top Reasons for Churning
count
0
100
200
300
400
500
600
700
800
Competitor
Dissatisfaction
Price
Other
Attitude
Churn Category

Recommendations for Customer Retention

- Personalized offers and discounts
- Improved customer support and engagement
- Long-term contract incentives
- Targeted marketing campaigns


Any Questions??

Thank You