

SyriaTel Customer Churn Prediction

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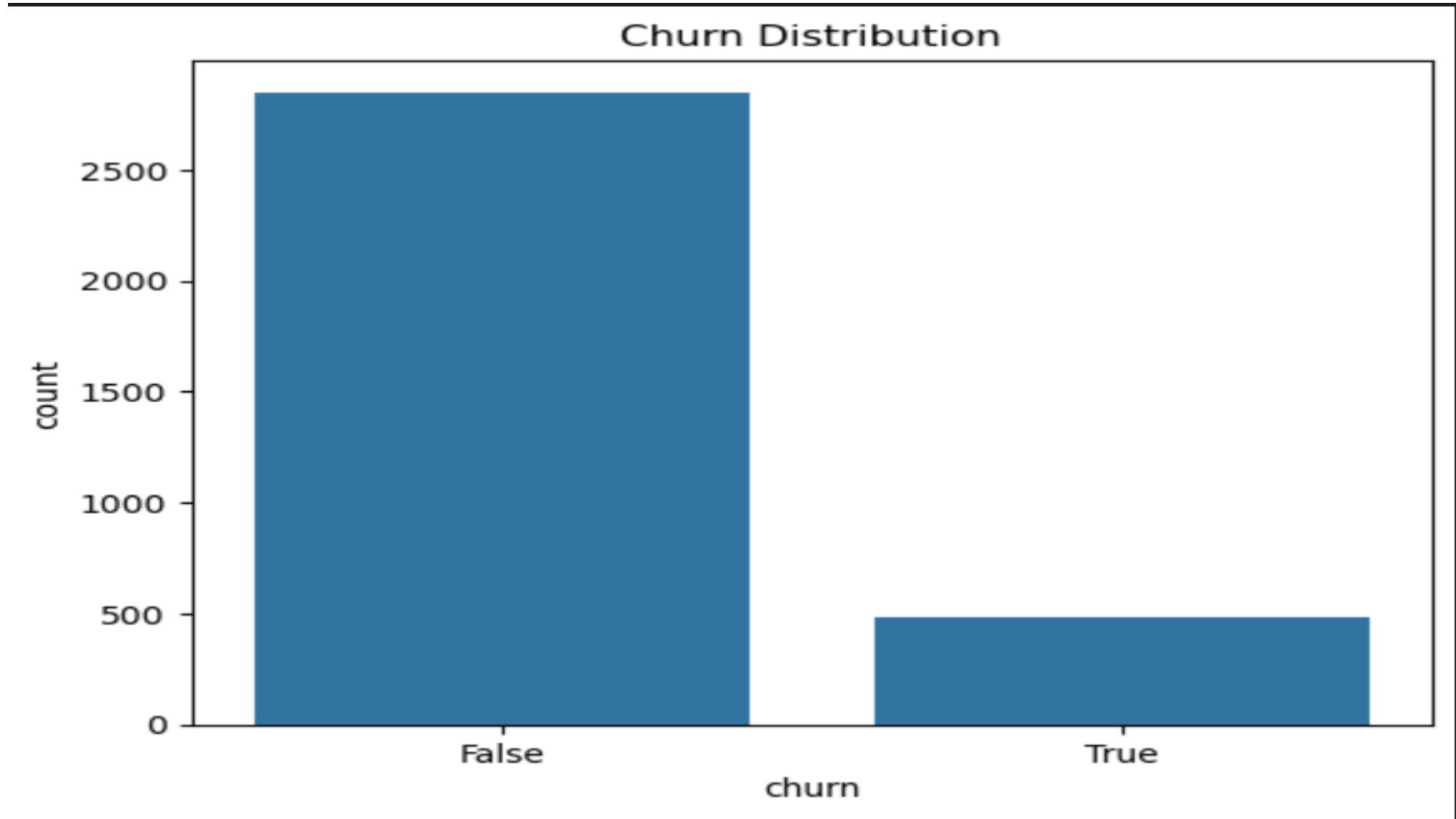
Project overview

- SyriaTel is a telecommunications service provider offering mobile, internet, and related services.
- There have been a loss in company's revenue due to customer's not staying for long.
- we want to build a classifier to predict whether a customer will soon stop doing business with SyriaTel, a telecommunications company.
- This is a binary classification problem.
- **Churn** refers to customers who stop using SyriaTel services.

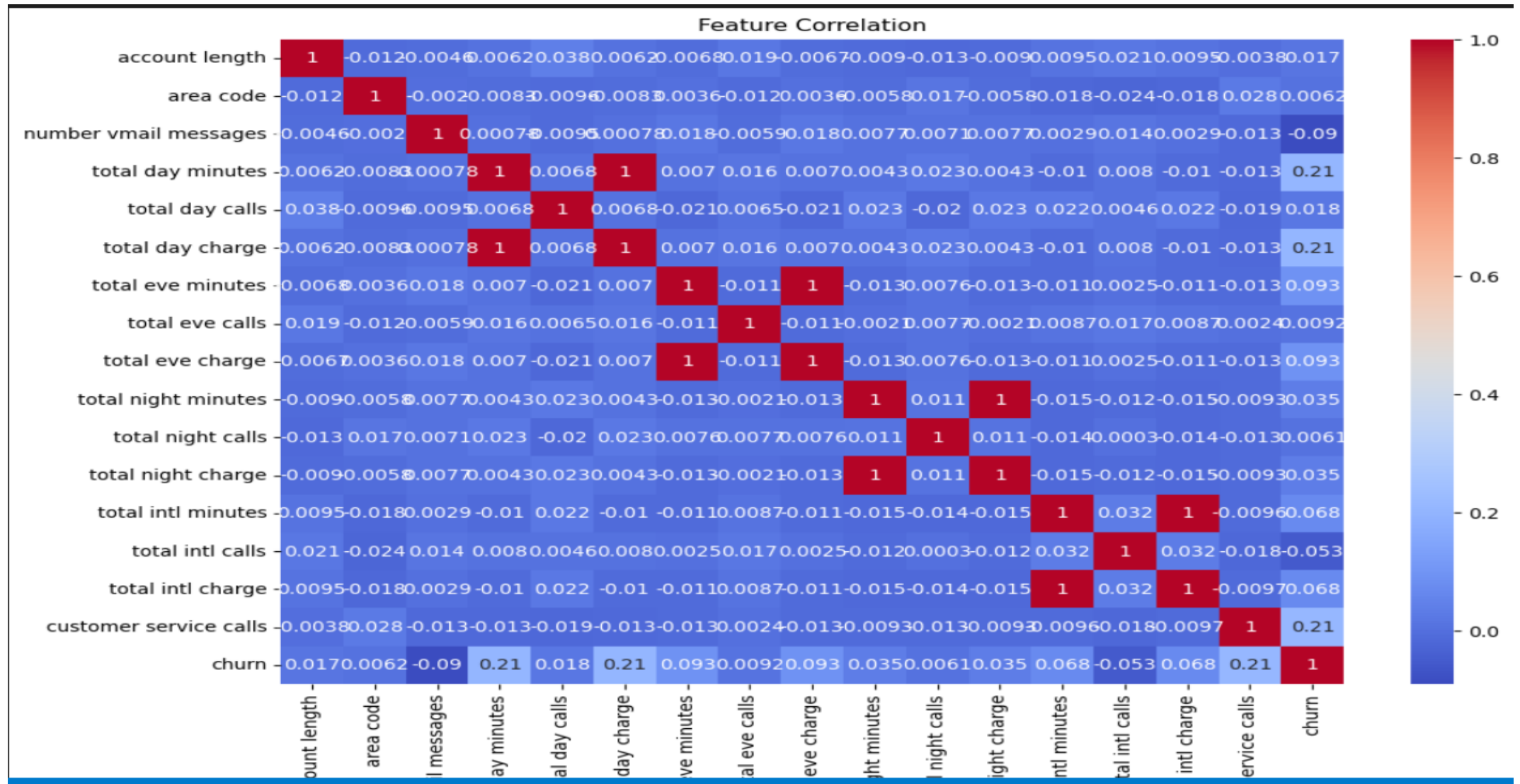
Business Problem & Objectives

- There have been a loss in company's revenue due to customer's not staying for long.
- Predict which customers are likely to leave SyriaTel (i.e., "churn") using data given.
- Why it matters:
 - Retaining existing customers is cheaper than acquiring new ones.
 - Helps identify at-risk customers early and take preventive action.

CHURN DISTRIBUTIONS



FEATURES CORRELATION



MODEL USED TO PREDICT CHURN

- **Logistic Regression: Simple and interpretable**
- **Decision Tree: Handles complex patterns**

Model	Accuracy	Precision (Churn)	Recall (Churn)	F1 Score (Churn)
Logistic Regression (Tuned)	86%	0.53	0.24	0.33
Decision Tree (Tuned)	90%	0.67	0.66	0.66

Findings and Recommendation:

- The best mode was tuned Decision Tree with 94% accuracy.
- Customers with high day-time charges, international plans, and frequent support calls are more likely to churn

Recommendations:

- SyriaTel should:
 - - Offer loyalty programs or bundle plans to high-risk segments.
 - - Reduce churn by proactively reaching out to users with frequent service issues.
 - - Consider offering discounts to users with high charges during the day or night periods.

Thankyou !