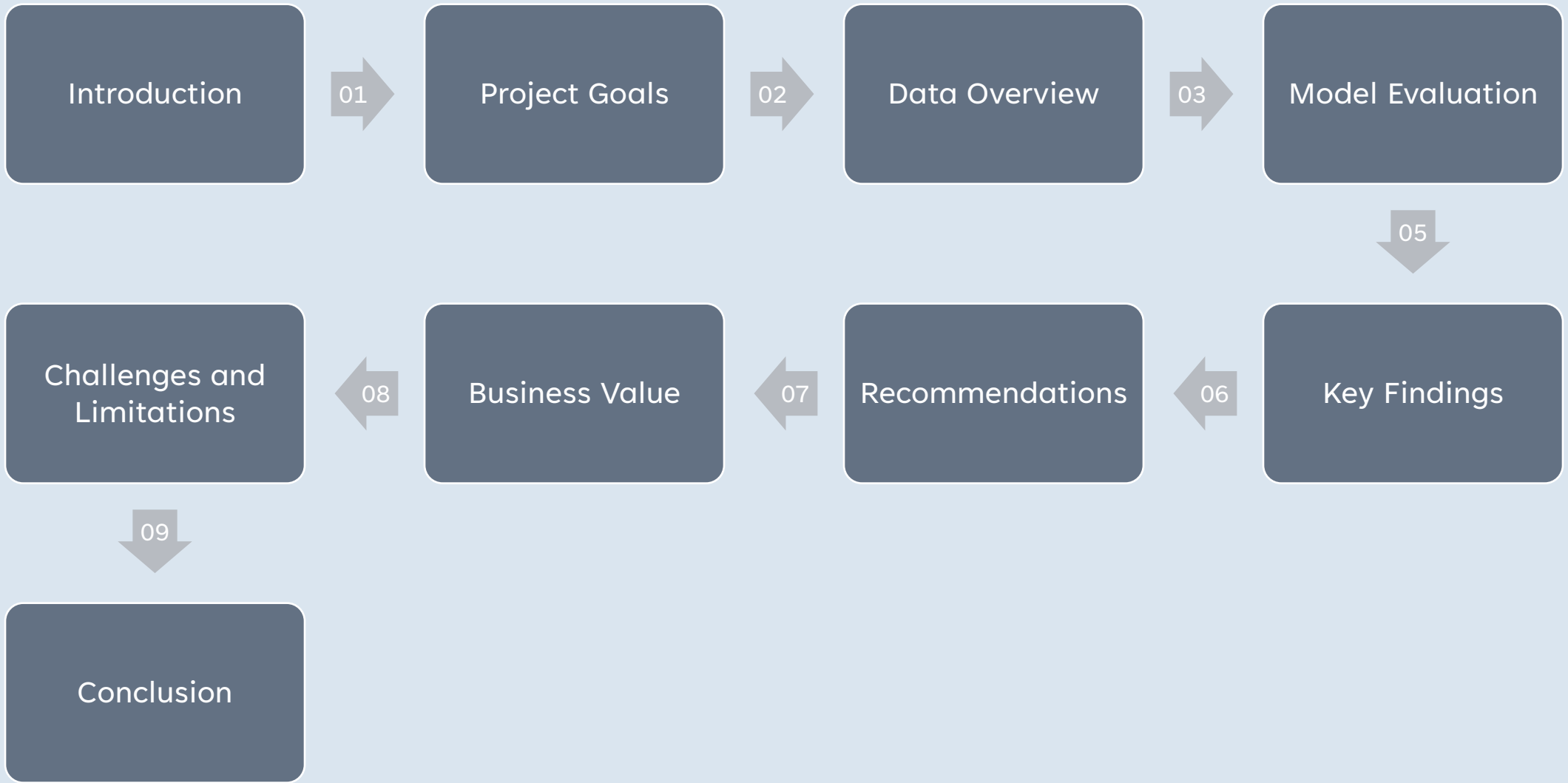
Predicting Customer Churn at SyriaTel

Leveraging Data to Enhance Customer Retention

Agenda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Introduction

Purpose: To present the analysis and predictive modeling efforts undertaken to address customer churn at SyriaTel.

Objective: Demonstrate the value of the project by showing how data-driven insights can inform effective retention strategies.

Project Goals

- **Primary Objective**:
  - Develop a robust classifier to predict customer churn.
- **Secondary Objectives**:
  - Improve customer retention strategies.
  - Optimize resource allocation towards high-risk customers.
  - Enhance overall customer satisfaction and loyalty.

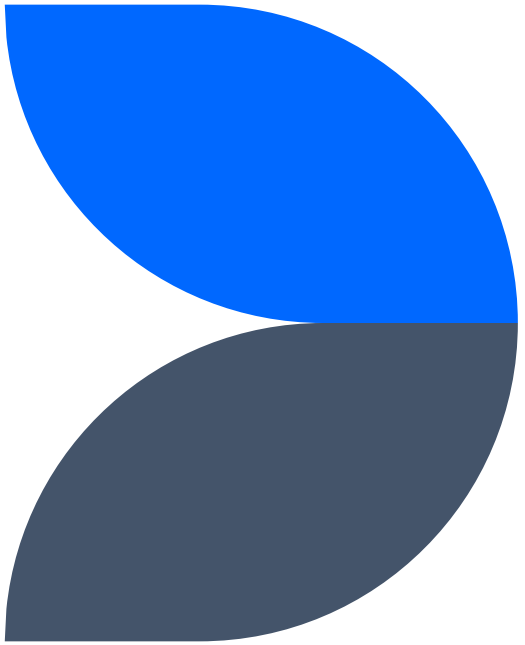
Data Overview

Dataset:

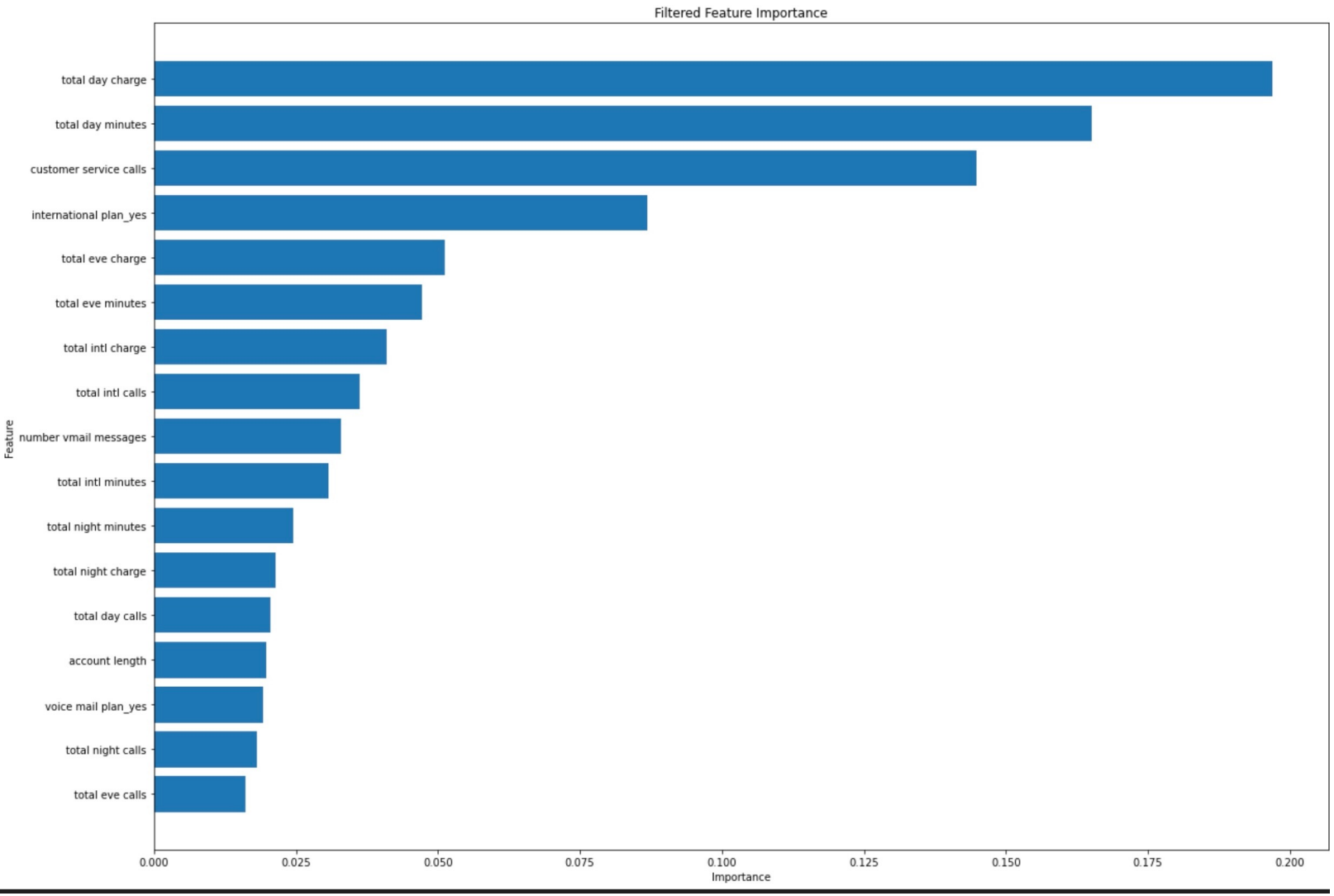
- **Source**: SyriaTel customer data
- **Key Features**: Total day minutes, total day charge, customer service calls, voicemail plan, international plan, etc.
- **Size**: 3,333 records, 21 features
- **Preprocessing**:
  - Handled missing values
  - Encoded categorical variables
  - Scaled numerical features

Selecting visual aids

Model Evaluation



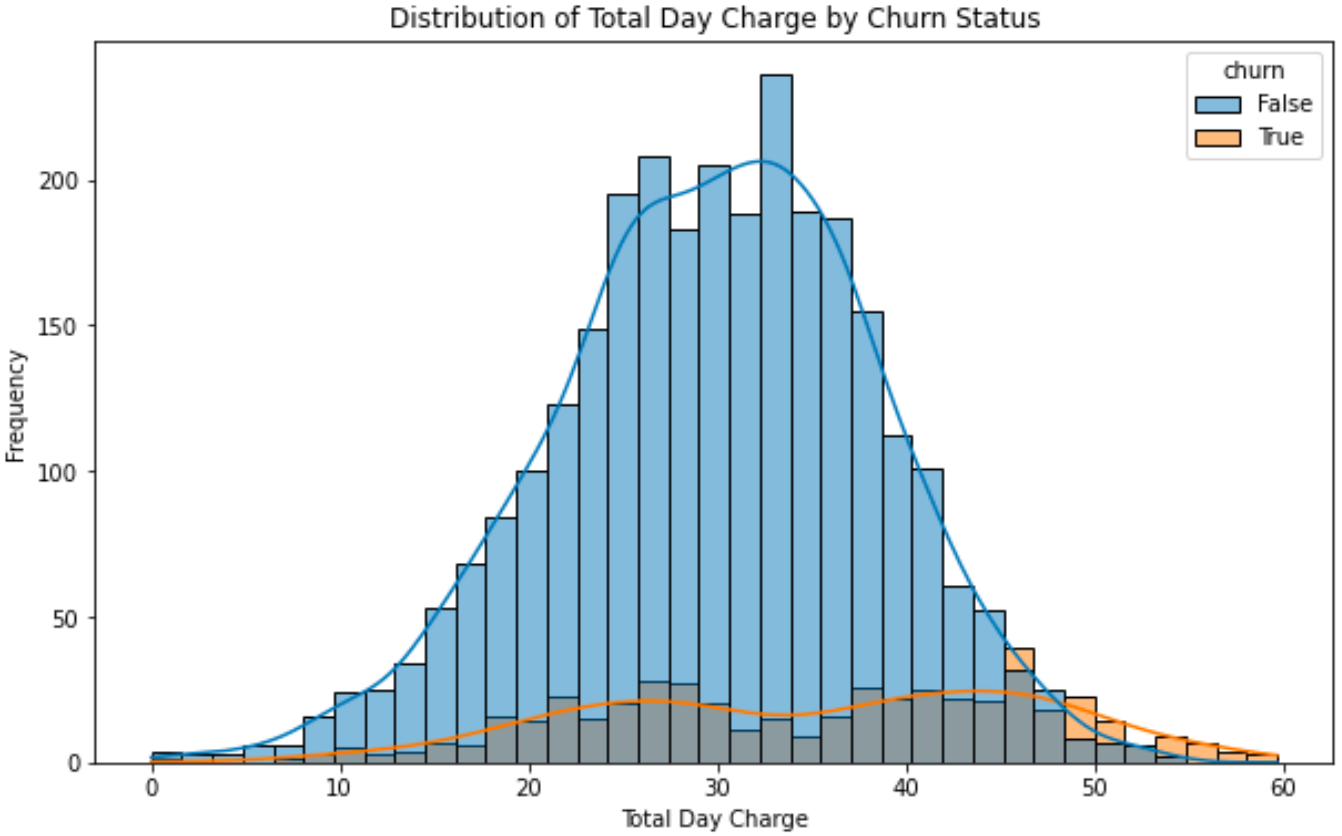
Visualizations



Given that "total day charge" is identified as the most important feature, we can interpret this in the context of the dataset and the business problem of predicting customer churn for SyriaTel.

Interpretation:
Significance of "Total Day Charge": The model finds "total day charge" to be the most influential factor in predicting customer churn. This means that the amount customers are charged for their daytime phone usage is a strong indicator of whether they will continue using the service or not.

Visualisations cont.



What does this mean:

High Charges and Churn:

Customers with higher "total day charges" are more likely to churn. This is evident from the presence of the orange density curve in the higher charge ranges.
This suggests a possible correlation between high daytime usage costs and the likelihood of a customer deciding to leave the service.

Recommendations based on data

Cost Sensitivity:

The plot indicates that managing the "total day charge" could be crucial in retaining customers. High daytime charges might lead to dissatisfaction, resulting in churn.

This aligns with the earlier finding that "total day charge" is the most important feature in predicting churn.

Actionable Insights:

Targeted Interventions: Customers with high "total day charges" should be targeted with retention strategies, such as discounts on daytime usage or alternative plans that offer better value for high usage.

Monitoring and Alerts: Implementing systems to monitor high "total day charges" and proactively alerting customers before they experience bill shock could help in reducing churn.

Business Value

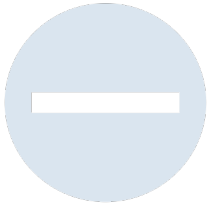
Strategic Benefits	
Improved Retention:	• **Impact**: Reduced churn rates will lead to increased revenue stability. • **Value**: Retaining existing customers is more cost-effective than acquiring new ones.
Enhanced Customer Satisfaction:	• **Impact**: Tailored plans and better support will improve customer loyalty. • **Value**: Satisfied customers are more likely to stay and recommend the organizations services.
Optimized Resource Allocation:	• **Impact**: Focused efforts on high-risk customers maximize return on investment (ROI). • **Value**: Efficient use of resources leads to better financial performance.
Actionable Insights:	• **Impact**: Data-driven decisions help in understanding customer behavior and preferences. • **Value**: Insights can guide marketing and service improvement strategies.

Limitations

Static Data Snapshot:

Issue: The analysis is based on historical data.

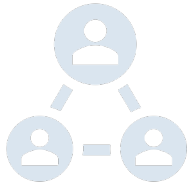
Impact: Customer behavior can change over time, so the model needs regular updates.



Feature Limitations:

Issue: Not all relevant factors influencing churn may be included.

Impact: Missing features could limit the model's accuracy and insights.



Implementation Challenges:

Issue: Implementing recommendations requires organizational changes.

Impact: This can be resource-intensive and may face resistance.

Thank you