



Predictive Model for Customer Churn

Project Progress and Key Findings

Agenda

Introduction
Data Overview
Model Performance
Business Impact
Recommendations
Conclusion

Introduction

Objective: Develop a predictive model to identify customers at risk of churning.

Importance: Enhancing customer retention and optimizing resource allocation.

Data Overview

Datasets Used:

- Historical customer data
- Historical pricing data
- Churn indicators

Feature Engineering:

- Creation of new features
- Combination of relevant columns

Model Performance

Accuracy: 89.87%

Precision for Non-Churned Customers: 90%

Recall for Non-Churned Customers: 100%

Precision for Churned Customers: 71%

Recall for Churned Customers: 5%

Confusion Matrix & Classification Report

- **Confusion Matrix:**
True Negatives: 2611
False Positives: 6
False Negatives: 290
True Positives: 15
- **Classification Report:**
Detailed metrics for both churned and non-churned customers



Business Impact

Customer Retention:

Accurate identification of non-churned customers
Focused retention strategies for churn risks

Cost Efficiency:

Resource allocation optimization
Minimizing unnecessary retention costs

Revenue Optimization:

Improved identification of churned customers
Enhanced customer satisfaction and loyalty

Recommendations

Address Class Imbalance:

- Techniques like oversampling, undersampling, or class weighting

Further Feature Engineering:

- Explore new features for better churn prediction

Model Tuning and Experimentation:

- Hyperparameter tuning and testing different models

Regular Model Updates:

- Keep the model updated with new data

Conclusion

Summary:

The model shows promising accuracy and insights.
Efficient resource allocation and revenue optimization.
Recommendations for further improvement.

Next Steps:

Implement recommendations and continue model refinement.
Regularly update the model with new data for sustained accuracy.