

Telco Customer Churn Analysis Report

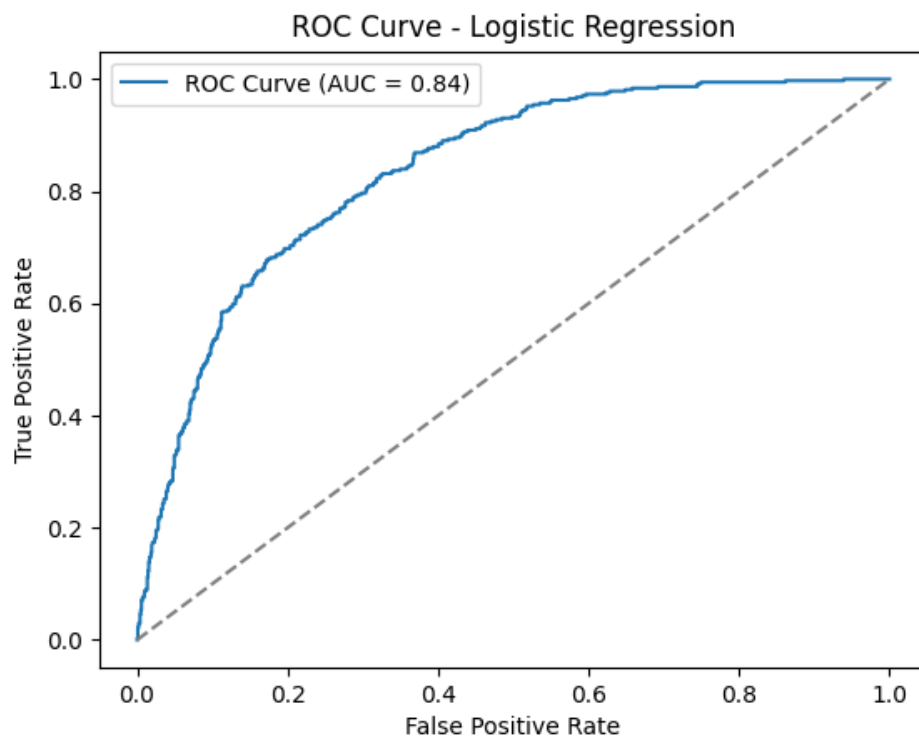
1. Project Overview

The goal of this project is to predict customer churn using the Telco dataset. Churn is defined as whether a customer leaves the service (Yes/No). We use Logistic Regression as the baseline model, and evaluate its performance using accuracy, precision, recall, F1-score, and ROC AUC.

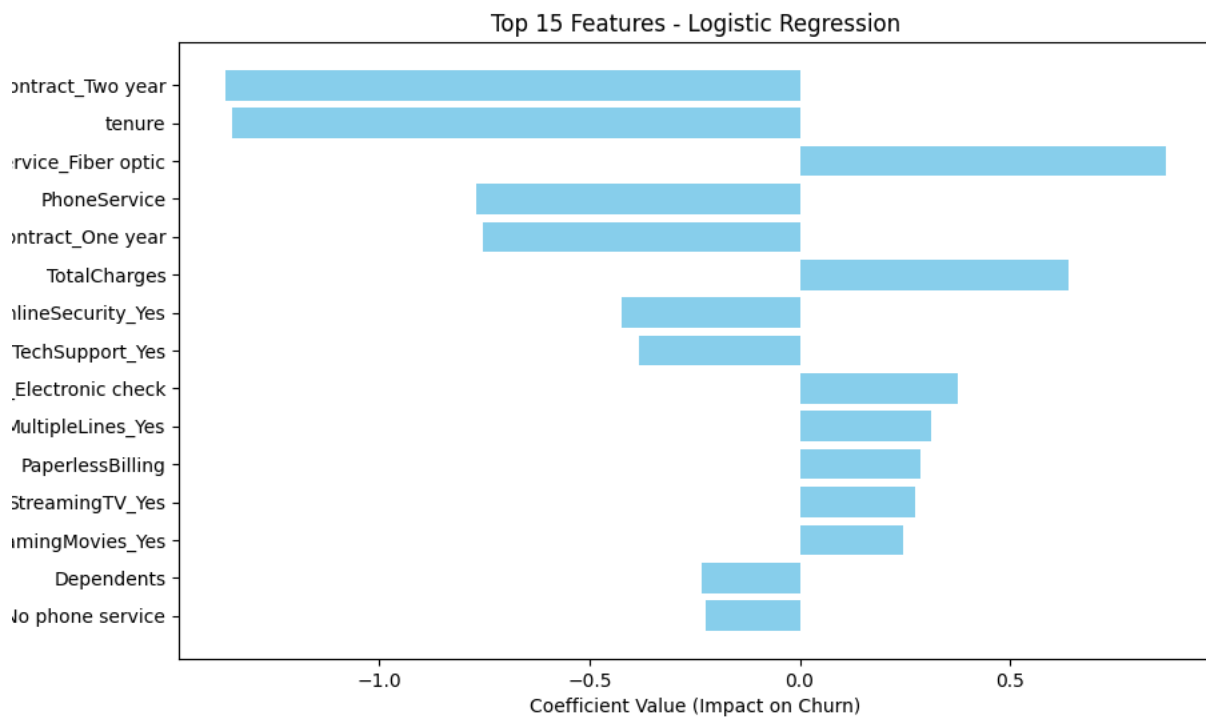
2. Model Performance

- Accuracy: 80.3%
- ROC AUC: 0.84
- Precision (Churn=1): 0.65
- Recall (Churn=1): 0.57
- F1-score (Churn=1): 0.61

3. ROC Curve



4. Key Drivers of Churn (Feature Importance)



Positive coefficients indicate higher churn risk, while negative coefficients suggest reduced churn risk. Key drivers include contract type, tenure, and payment method.

5. Business Insights

- Customers on **month-to-month contracts** are most at risk of churning.
- Longer tenure significantly reduces churn risk.
- Customers paying via **electronic check** show higher churn rates.
- Lack of value-added services (e.g., Tech Support, Online Security) increases churn.