Telecom Churn Prediction

Project Overview

This project aims to build a logistic regression model to predict customer churn for a telecom company. The dataset contains customer demographics, services availed, and expenses to help predict whether a customer will switch to a different telecom provider.

The goal is to develop a classification model that identifies whether a customer will churn (1) or not (0).

Datasets

There are three main datasets used in this project:

* [**churn\_data.csv**](https://github.com/Priyankaswain17/Telecom-churn-prediction-using-logistic-regression/blob/main/churn_data.csv) - Contains information about customer churn behavior.
* [**internet\_data.csv**](https://github.com/Priyankaswain17/Telecom-churn-prediction-using-logistic-regression/blob/main/internet_data.csv) - Contains data related to internet services used by the customers.
* [**customer\_data.csv**](https://github.com/Priyankaswain17/Telecom-churn-prediction-using-logistic-regression/blob/main/customer_data.csv) - Contains customer demographic and service-related information.

Model Performance Conclusion

* **True Positive Rate (TPR or Sensitivity/Recall)** = 0.6323
  + This indicates that the model correctly identifies about **63.23%** of the actual churn cases (customers who left the service).
* **True Negative Rate (TNR or Specificity)** = 0.8416
  + This indicates that the model correctly identifies about **84.16%** of the non-churn cases (customers who stayed).