CHURN-FLAG Report

# Introduction

In this report, we discuss the creation and strategic usage of the CHURN-FLAG variable in a customer churn prediction project. This variable plays a crucial role in helping businesses identify customers who are at risk of leaving, and to intervene with timely retention strategies.

# What is CHURN-FLAG?

The CHURN-FLAG is a binary variable derived from machine learning model predictions. It assigns a value of YES (1) to customers predicted to churn, and NO (0) to customers predicted to stay.

# Purpose of CHURN-FLAG

The main purpose of the CHURN-FLAG is to help businesses make data-driven decisions by identifying high-risk customers. These flags allow marketing and support teams to focus their efforts more efficiently.

* Use cases include:
* • Targeted email campaigns offering discounts or loyalty rewards.
* • Priority handling in customer support workflows.
* • Inclusion in predictive retention strategies and feedback loops.

# Business Impact

With the CHURN-FLAG, organizations can focus on retaining valuable customers through timely interventions. This predictive feature enables segmentation and strategic prioritization, optimizing the return on retention investments.

# Implementation Summary

The CHURN-FLAG was generated through the following steps:  
1. The dataset was preprocessed by normalizing and encoding relevant columns.  
2. The XGBoost model, identified as the most accurate classifier, was used to generate churn probability scores.  
3. A classification threshold (0.5) was applied to determine if a customer is likely to churn.  
4. The results were mapped back to the original dataset containing identifiers such as Phone and State.  
5. The final dataset was exported for business usage and reporting.

# Strategic Use of CHURN-FLAG

• CRM Integration: Tag CHURN-FLAG = YES customers for automated campaigns.

• Support Escalation: Prioritize queries and complaints of high churn-risk users.

• Analytics Dashboard: Visualize churn risks across regions, customer segments, and plans.

# Output Summary

The following file is generated as part of the project:  
- churned\_customers\_report.csv: Subset of customers predicted to churn (CHURN-FLAG = YES).

Here are **detailed business suggestions** for customers predicted as CHURN-FLAG = YES:

**💼 Business Suggestions for CHURN-FLAG = YES Customers**

1. **🎯 Targeted Retention Campaigns**  
   Launch personalized retention offers such as:
   * Discounts on current plans
   * Free add-on services (e.g., extra data, free international calls)
   * Loyalty rewards or cashback for long-term renewal
2. **📞 Customer Service Prioritization**  
   Route churn-flagged customers to top-tier customer service agents for faster resolution.
   * Provide training to agents to handle churn-sensitive interactions
   * Use empathetic communication strategies
3. **📊 Churn Score Dashboard**  
   Create internal dashboards in CRM with churn risk scores to:
   * Alert support staff during incoming/outgoing calls
   * Prioritize follow-ups with high-risk customers
4. **📬 Automated Email/SMS Campaigns**  
   Integrate the churn list into your marketing system to:
   * Send automated messages with personalized incentives
   * Remind them of unused benefits or new features
5. **📢 Feedback Collection Initiatives**  
   Ask churn-flagged users for feedback to understand dissatisfaction:
   * Offer quick survey links or chatbot feedback
   * Incentivize with gift vouchers for completed responses
6. **🔁 Plan Repackaging Suggestions**  
   Use usage patterns to recommend better-suited plans:
   * Lower-cost options if customer usage has dropped
   * High-value bundles if usage is high but inconsistent
7. **📍 Regional or Demographic Targeting**  
   Use state-wise or region-wise churn patterns to:
   * Launch localized campaigns
   * Refine pricing based on region-specific competition
8. **🧠 Predictive Customer Experience Monitoring**  
   For future strategies:
   * Integrate churn predictions into Net Promoter Score (NPS) workflows
   * Use AI to flag customers before they express dissatisfaction