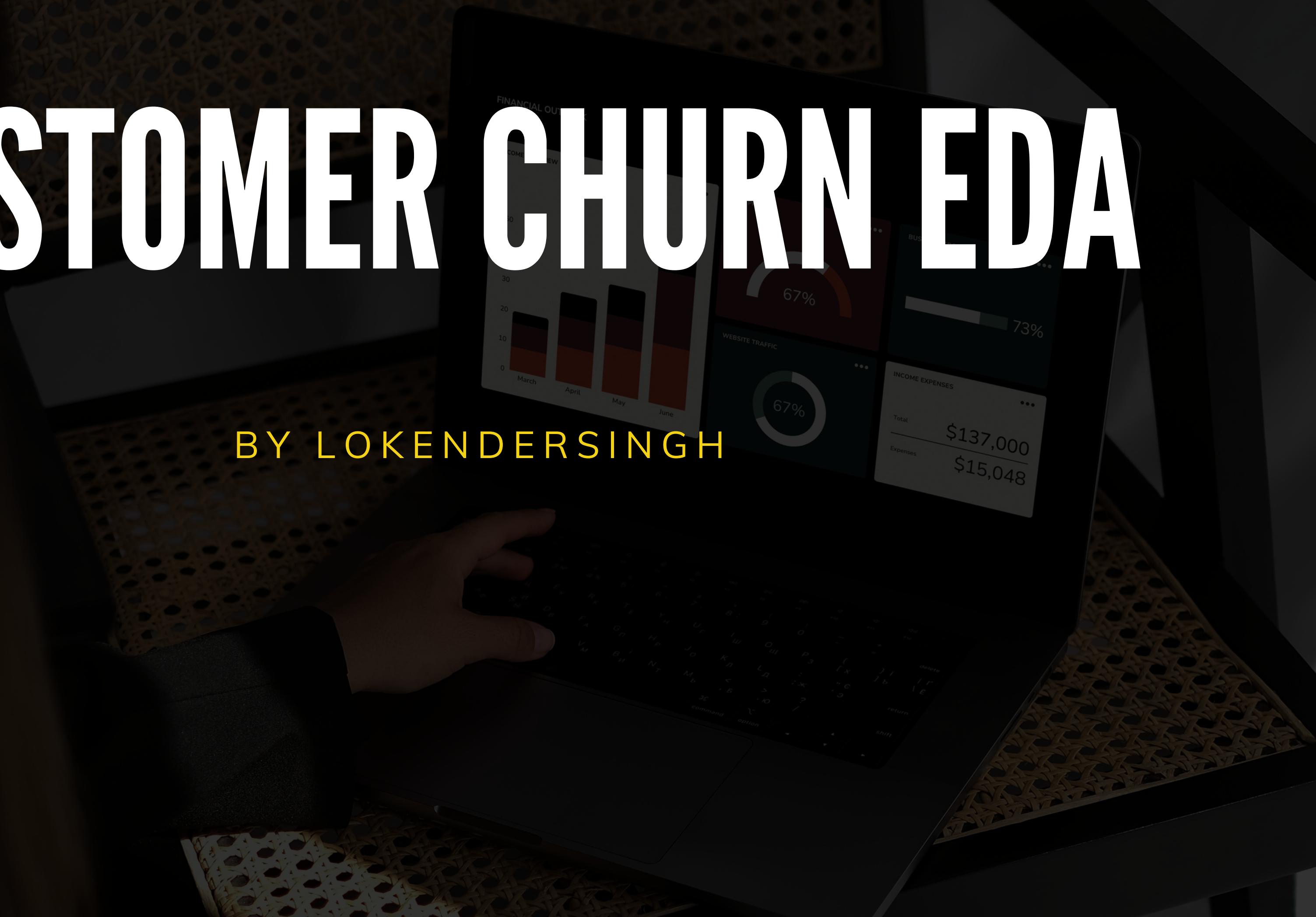


CUSTOMER CHURN EDA

BY LOKENDERSINGH



EXECUTIVE SUMMARY

This report provides a comprehensive exploratory data analysis (EDA) of a telecom company's customer data to identify the main factors influencing customer churn. The dataset consists of 7,043 records and 21 attributes including demographic, service usage, billing, and contract information.

OVERVIEW OF THE DATASET

- Total Customers: 7,043
- Churned Customers: 1,869 (26.54%)
- Non-Churned Customers: 5,174 (73.46%)
- The dataset required some preprocessing, such as replacing blank TotalCharges for customers with tenure = 0, and converting SeniorCitizen from 0/1 to Yes/No for clarity.

KEY FINDINGS

1. Demographics and Churn

- Senior Citizens account for a disproportionately high share of churners.
 - While senior citizens represent about 16% of total customers, they make up a higher percentage of those who churn.
- Partner and Dependents:
 - Customers without a partner or dependents are more likely to churn.
 - This suggests that users with family obligations may be more stable and loyal.

INDUSTRY BACKGROUND

WHAT IS THE INDUSTRY'S HISTORY
AND WHAT ARE ITS HIGH-LEVEL
DEVELOPMENT PATTERNS?
PREDICT FUTURE OUTCOMES,
WHERE THE
INDUSTRY IS HEADED.



2. Tenure and Churn Relationship

- Churn is highly skewed toward customers with short tenure:
 - A significant number of customers who left had only 1 to 2 months of service.
 - Customers with tenure over 60 months are far less likely to churn, indicating strong retention among long-term users.
- Insight: Early-stage experience is critical. First few months of customer lifecycle are most vulnerable.

3. Contract Type Influence

- Customers with month-to-month contracts show the highest churn rate (~43% churn rate within this segment).
- Customers with one-year contracts churn less (~11%).
- Customers with two-year contracts churn the least (~3%).

This confirms that long-term contracts greatly reduce churn, likely due to commitment and incentives.

4. Service Usage Patterns

- Customers not using internet services have lower churn.
- Among internet users:
 - Those without OnlineSecurity or TechSupport are more likely to churn.
 - Those with these services enabled show better retention, implying these features add perceived value.
- Device Protection and Backup services also show similar retention trends.

5. Billing Preferences

- Churn is highest among users paying through Electronic Check (over 40% churn in this group).
- Automatic payment methods such as bank transfers and credit cards are linked with better customer retention.
- Customers opting for Paperless Billing are also more likely to churn, possibly indicating digitally disengaged users.

6. Financial Aspects

- Customers with higher monthly charges churn more frequently.
Many of them are on premium plans with fiber internet and streaming services.
- However, customers with high TotalCharges (long-term users) churn less, reinforcing that longevity brings stability.

RECOMMENDATIONS

1. RETENTION STRATEGIES:

- FOCUS RETENTION EFFORTS ON NEW CUSTOMERS (<6 MONTHS TENURE).
- OFFER ONBOARDING BENEFITS AND REGULAR CHECK-INS DURING EARLY MONTHS.

2. CONTRACT OPTIMIZATION:

- ENCOURAGE MONTH-TO-MONTH USERS TO SHIFT TO ANNUAL CONTRACTS WITH BUNDLED BENEFITS.

3. ADD-ON SERVICES:

- PROMOTE TECH SUPPORT, ONLINE SECURITY, AND DEVICE PROTECTION TO ALL CUSTOMERS.
- THESE SERVICES INCREASE STICKINESS.

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- 4. BILLING IMPROVEMENTS:**
PROVIDE INCENTIVES FOR SWITCHING TO AUTOMATIC PAYMENT METHODS.
INVESTIGATE CUSTOMER FRICTION POINTS IN ELECTRONIC CHECK
PROCESSING.
- 5. TARGETED CAMPAIGNS:**
IDENTIFY HIGH-RISK SEGMENTS: SENIOR CITIZENS ON MONTH-TO-MONTH
PLANS USING ELECTRONIC CHECKS.
OFFER THEM CUSTOM PACKAGES WITH BETTER TERMS TO RETAIN THEM.

GROUND

THE INDUSTRY'S HISTORY

THANK YOU

