

# Customer Churn Analysis

Telecom Customer Churn Dataset

Author: **Aniket Singh**

Role: Data Analyst | Python, Pandas, Matplotlib

**Tools used:** Python, pandas, matplotlib

**Deliverables:** Data cleaning, EDA, Churn insights, Charts, PDF report

# Executive Summary

## Customer Churn Analysis Key Insights

### 1 Overall Churn Rate:

- The overall churn rate is 49.60%, which indicates almost half of customers are leaving.
- This is significantly high, suggesting urgent retention action.

### 2 High-Risk Contract Type:

- One-year contract customers show the highest churn rate, followed by Month-to-month.
- Long-term plan customers (Two-year) churn less.

Customers feel more satisfied or locked in long-term plans.

### 3 Internet Service Risk Pattern:

- Customers with No internet service churn the most, which implies:
- These customers depend only on phone services.
- Highly competitive alternatives may drive them away.

### 4 Tenure Group When customers leave

- Highest churn occurs in the 7–12 month group.
- This means many customers leave within their first year, possibly after:
  - Trial period ends
  - Price increases
  - Dissatisfaction during onboarding

### 5 Customer Behavior Pattern

- Short-tenure customers (0–6 months) also show high churn early dissatisfaction.
- Stable customers (25+ months) tend to stay longer loyal base.

### Recommendation Summary

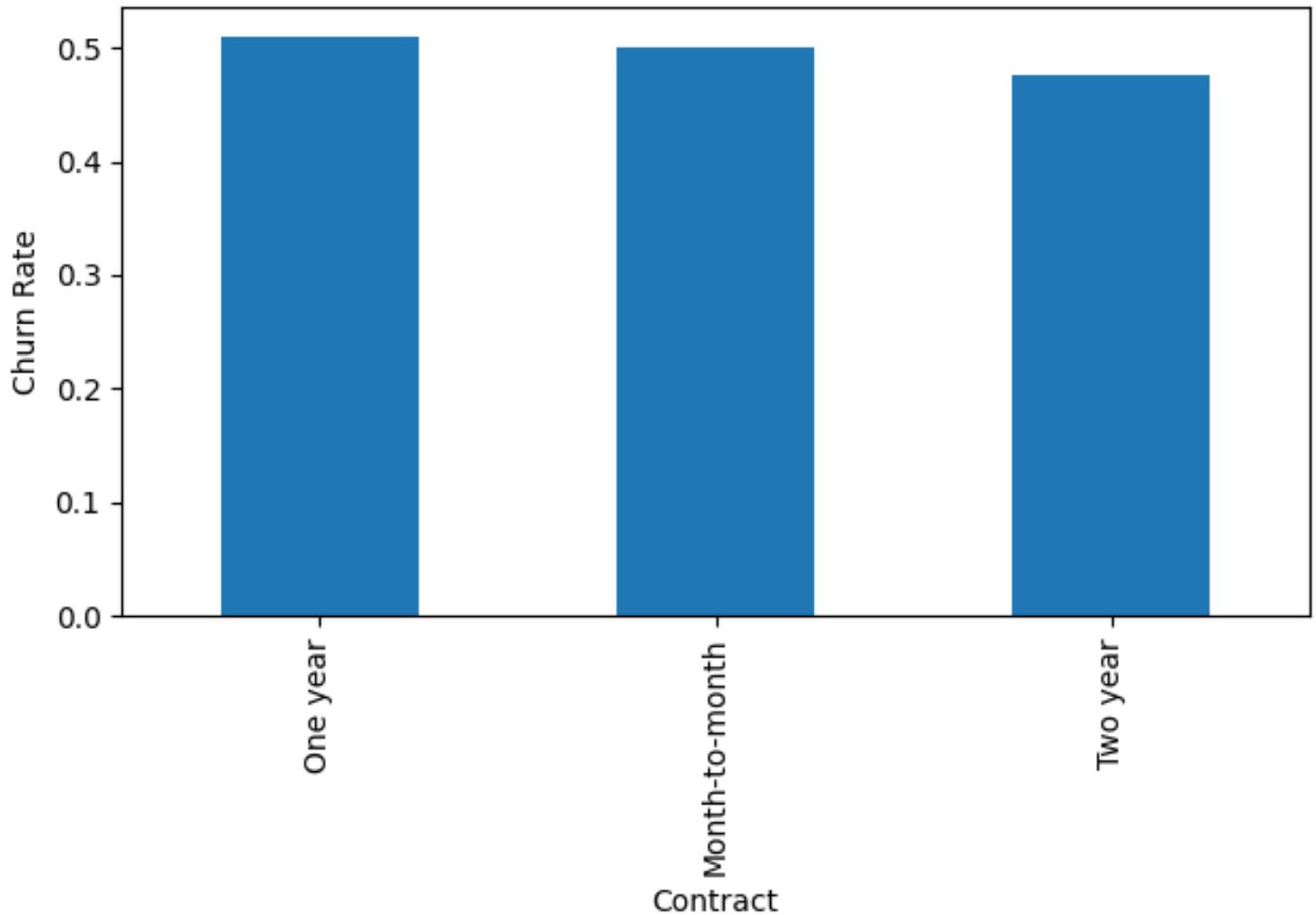
- Improve onboarding experience for new customers (first 6–12 months).

- Offer renewal incentives for 1-year contract customers.
- Bundle internet service for customers without internet to reduce churn.
- Track satisfaction for customers during month 7–12 highest drop-off point.

## **Key Findings & Recommendations**

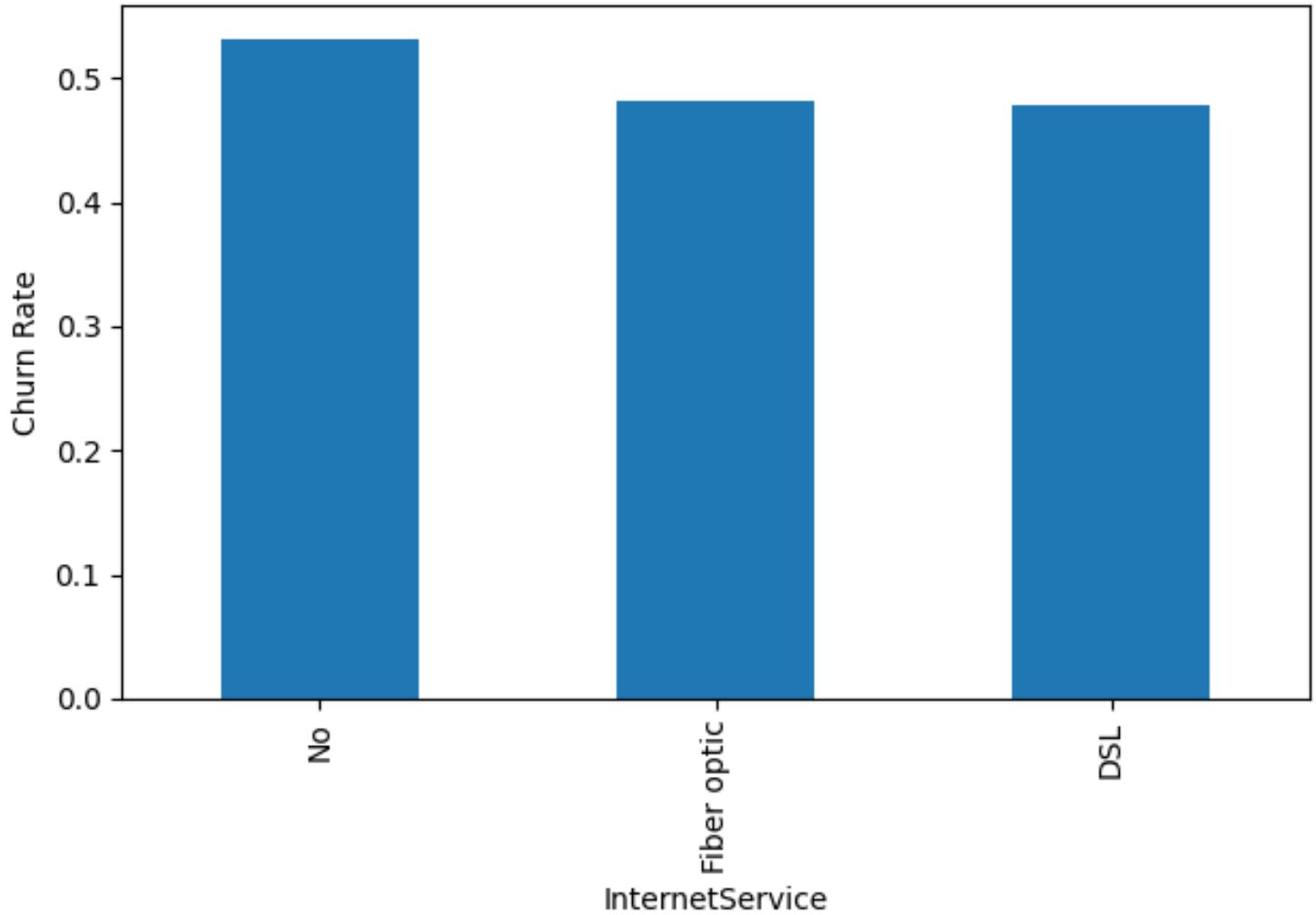
- Overall churn rate: 49.60% (1500 customers).
- Highest churn by contract: One year (highest churn rate).
- Highest churn by internet service: No.
- Focus retention efforts in months 6–12 (onboarding + renewals).
- Offer bundle incentives to customers without internet.
- Monitor one-year contract renewals and offer targeted discounts.

### Churn Rate by Contract



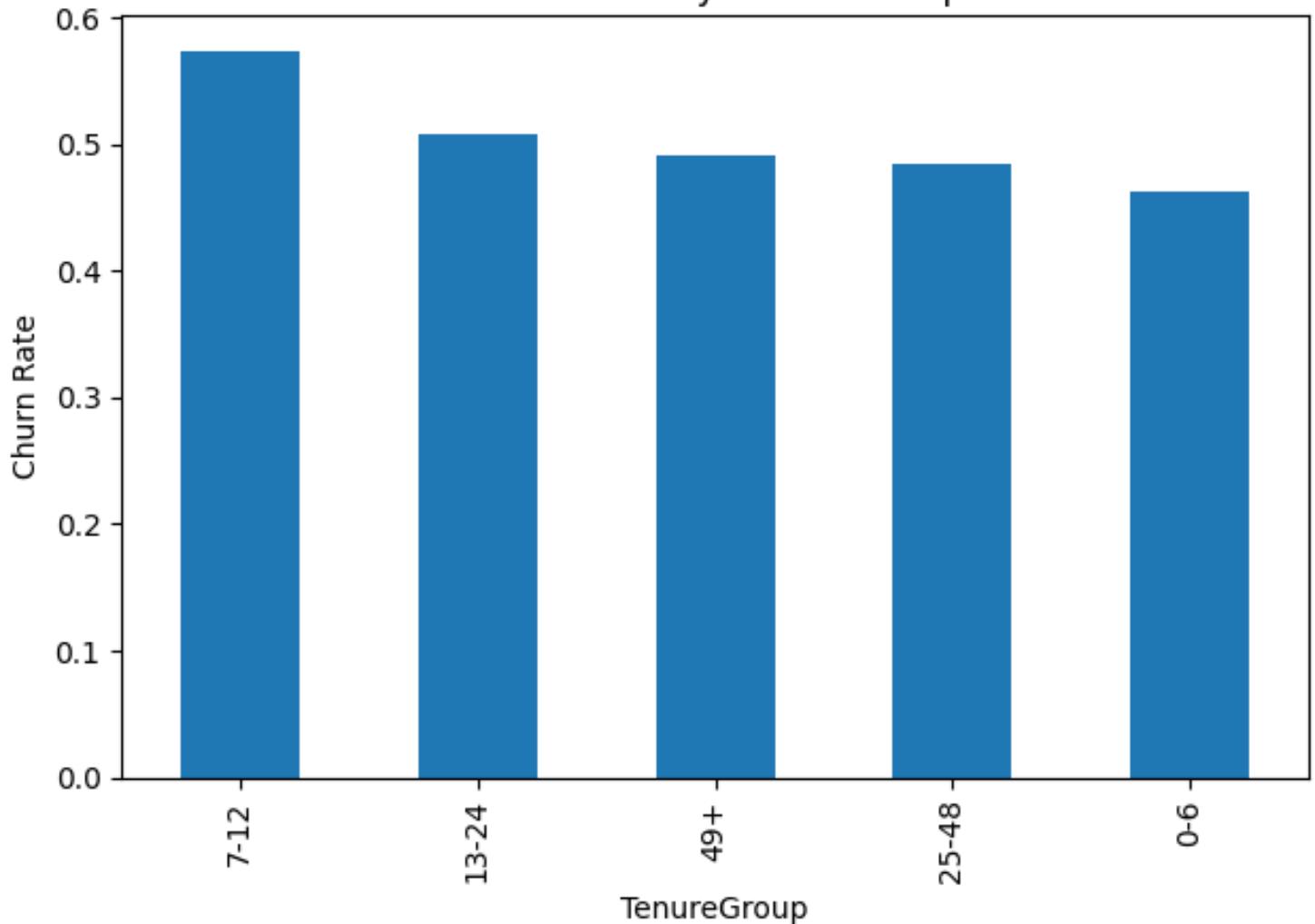
### Churn By Contract

### Churn Rate by Internet Service



**Churn By Internet**

### Churn Rate by Tenure Group



### Churn By Tenure

Report generated with Python (pandas, matplotlib).