Customer Churn Analysis Report (Python + Pandas + Seaborn)

Project Summary:

This project involved analyzing a telecom company's customer data to identify patterns and predictors of customer churn. Using Python (pandas, seaborn, matplotlib), I performed data cleaning, exploratory analysis, and generated insights to help the business reduce churn.

Key Findings:

1. Overall Churn Rate

- Approximately **26%** of customers have churned.
- Indicates a potential issue with retention that warrants further investigation.

2. Churn by Contract Type

- Customers on **Month-to-month contracts** had the highest churn rate.
- Those on **One-year or Two-year contracts** were significantly more likely to stay.

Suggests long-term contracts improve customer retention.

3. Churn by Tenure

- Customers with **low tenure (0–12 months)** had higher churn.
- Longer-tenured customers were much more stable.

Indicates early lifecycle churn is a critical focus area.

4. Churn and Monthly Charges

- Customers who churn tend to pay **higher monthly charges**.

Pricing sensitivity may be a contributing factor.

5. Gender and Churn

- No significant difference in churn between **males and females**.

Gender is not a strong predictor in this dataset.

Tools Used:

- Python (Pandas, NumPy)
- Data visualization (Seaborn, Matplotlib)
- Jupyter Notebook