Customer Churn Analysis Report

Project Title: Telco Customer Churn – SaaS Subscription Insights

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1. Executive Summary

This project analyses customer churn for a subscription based telecom SaaS business using the Telco Customer Churn dataset from Kaggle and a cleaned, analysis ready dataset. The objective was to identify churn drivers, quantify revenue impact, and recommend actionable retention strategies.

Key highlights:

- **Overall churn rate:** 26.54% (1,869 of 7,043 customers)
- **Estimated revenue loss due to churn:** $139,131
- **Highest risk segments:** new customers, month to month contracts, Fiber optic users, and customers with higher monthly charges
- **Retention opportunity:** Longer contracts and improved early customer engagement significantly reduce churn

2. Data Overview

- **Raw Data Source:** Kaggle – Telco Customer Churn Dataset
- **Cleaned Dataset:** Telco Churn – Clean Data (prepared using Google Sheets)

Data Preparation Included:

- Handling missing and inconsistent values
- Creating business friendly groupings (tenure, monthly charges)
- Encoding churn for KPI analysis

Final Dataset Size: 7,043 customers

Key Variables Analysed:

- Tenure (New, Medium, Long)
- Contract Type (Month to month, One year, Two year)
- Internet Service Type (Fiber optic, DSL, None)
- Monthly Charges (Low, Medium, High)

- Churn Status (Yes / No)

3. Dashboard Insights

Tenure vs Churn

- New customers: **55.9% churn**
- Medium tenure: **30.1% churn**
- Long tenure: **14.1% churn**

Insight: Churn risk is highest during the first year, highlighting the importance of early retention and onboarding.

Monthly Charges vs Churn

- Customers with higher monthly charges show significantly higher churn.

Insight: Price sensitivity is a key churn drive; higher pricing must be matched with perceived value and service quality.

Internet Service vs Churn

- Fiber optic customers churn more than DSL and non-internet customers.

  Insight: Potential service quality, pricing, or expectation gaps exist in fibre optic offerings.

Contract Type vs Churn

- Month to month contracts show the highest churn
- Two year contracts show the lowest churn

Insight: Contract length strongly correlates with customer retention.

4. Business Impact

- **Direct revenue loss:** $139,131 due to churn
- **Reduced customer lifetime value:** Especially among month to month customers
- **Operational risk:** High churn among new customers indicates onboarding and service experience gaps

5. Recommendations

Short Term

- Implement targeted onboarding programs for new customers
- Offer early engagement incentives and proactive support
- Introduce loyalty or usage based discounts for high charge customers

Medium Term

- Incentivize longer term contracts through bundled services or pricing benefits
- Segment customers by churn risk for targeted retention campaigns

Long Term

- Develop predictive churn models for proactive intervention
- Invest in customer experience improvements, particularly for Fiber op

6. Conclusion

Customer churn poses a significant revenue and growth risk for subscription based businesses. This analysis demonstrates that churn is primarily driven by early tenure, flexible contract structures, and pricing sensitivity. By implementing targeted retention strategies focused on high risk segments, the business can reduce churn, recover lost revenue, and strengthen long term customer relationships.