Customer Churn Analysis

Quantifying churn drivers and developing data-driven retention strategies for a SaaS telecom business.

CHALLENGE

The Problem

High customer churn directly threatens recurring revenue and business sustainability. For subscription-based businesses, understanding why customers leave is critical to survival and growth.

This analysis identifies the root causes of churn, quantifies the financial impact, and provides actionable retention strategies.

My Analytical Approach

01

Data Sourcing & Cleaning

Acquired Kaggle telecom dataset and transformed raw data in Google Sheets, adding tenure groups and churn indicators.

02

KPI Calculation

Computed churn rates, revenue impact, and segment-level metrics.

03

Dashboard Design

Built interactive Looker Studio dashboard with filters, KPIs, and visualizations.

04

Insight Generation

Identified churn drivers and developed actionable business recommendations.

Key Metrics at a Glance

26.54%

Overall Churn Rate

More than 1 in 4 customers left the service

$139K

Revenue Lost

Direct financial impact from churned customers

These metrics establish the business case for retention initiatives. A 26.54% churn rate represents significant customer loss, while $139K in lost revenue quantifies the financial urgency. The following analysis identifies where to focus retention efforts for maximum impact.

Churn Drivers Identified

Contract Type

Month-to-month contracts show **45% churn vs. 11% for long-term**. This flexibility attracts price-sensitive customers but increases turnover risk.

Customer Tenure

42% of new customers churn within the first year. Early engagement is critical to retention.

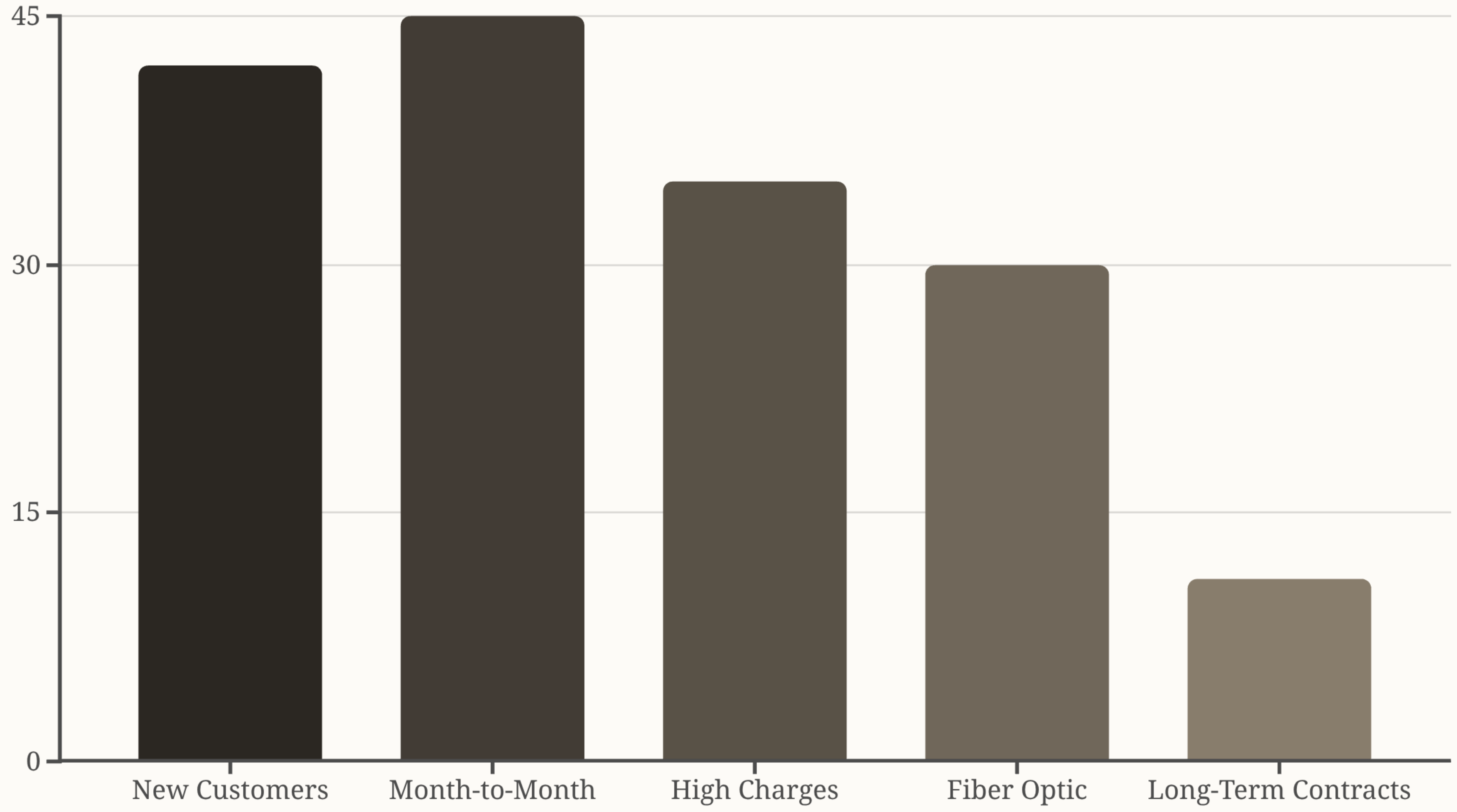
Pricing Impact

High monthly charges correlate with churn. **Customers paying $65+ show elevated risk.**

Service Type

Fiber optic users churn at **30% vs. 11% for DSL**. Service quality issues may be driving dissatisfaction.

Customer Segments at Risk



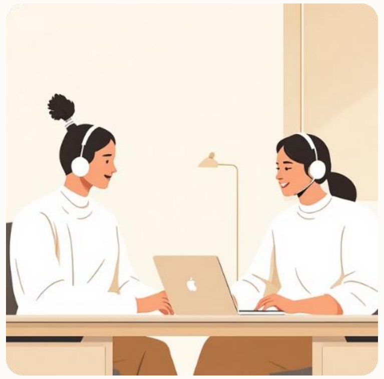
Critical Findings

Month-to-month customers and new subscribers represent the highest churn risk, both exceeding 40%. In contrast, long-term contract holders show only 11% churn—a 4x improvement. This stark difference reveals the power of commitment mechanisms.

Opportunity: Targeted onboarding programs for new customers and contract incentives for flexible plans could reduce churn by 30-40% in these segments.

RECOMMENDATIONS

Strategic Actions to Reduce Churn

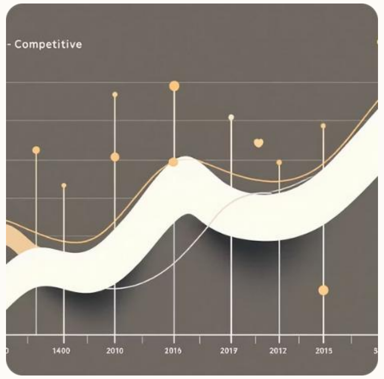


Enhanced Onboarding

Implement first-year support programs to reduce new customer churn from 42% to 25-30%, protecting ~$40K in annual revenue.

Contract Incentives

Offer discounts for annual commitments to shift customers from month-to-month (45% churn) to longer terms (11% churn), reducing overall churn by 5-8%.



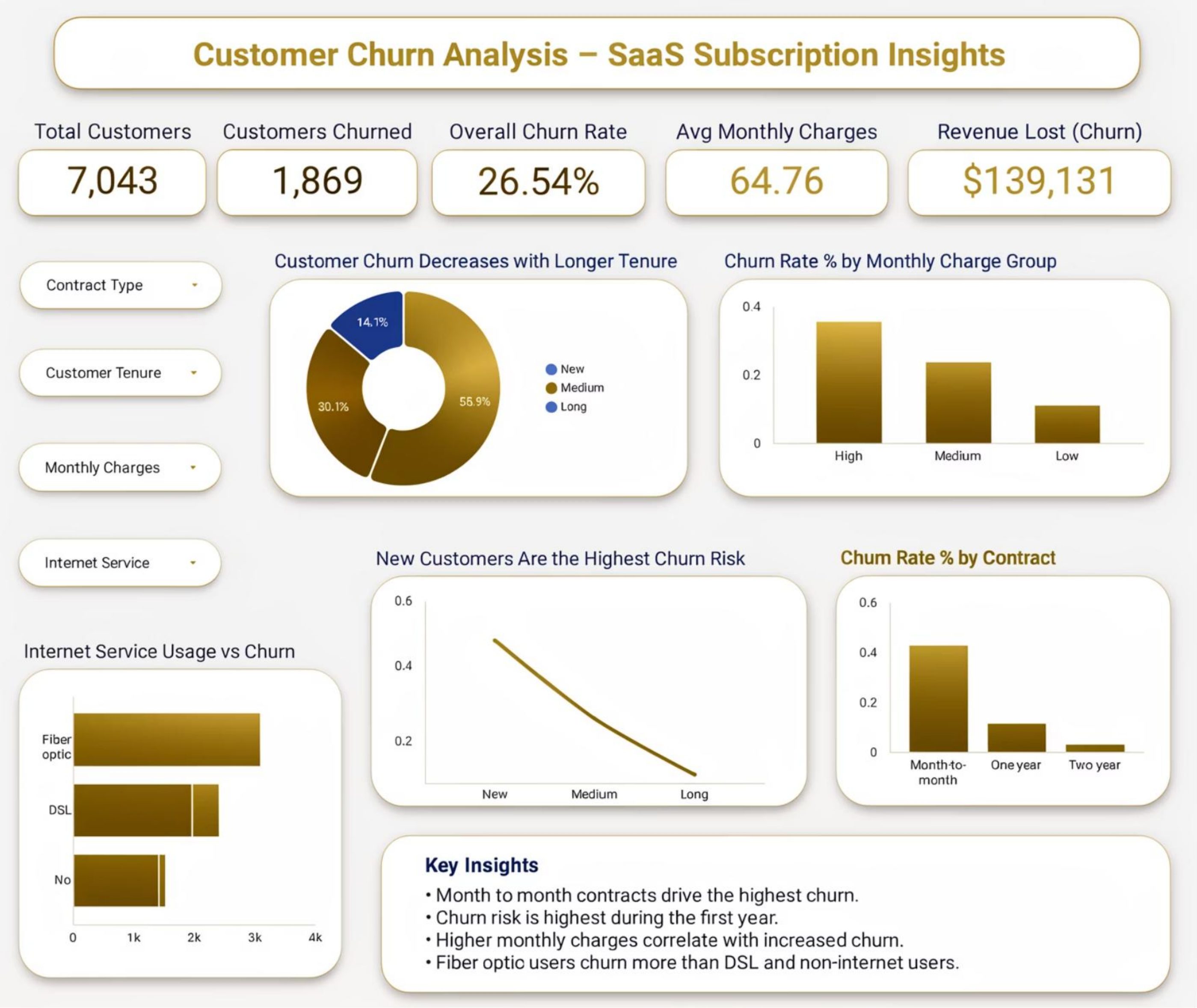
Pricing Optimization

Review pricing tiers for high-charge customers and introduce flexible payment options to reduce price-driven churn.

Service Quality

Investigate fiber optic service issues to improve the 30% churn rate in this segment.

Interactive Dashboard



The Looker Studio dashboard enables interactive exploration of churn patterns across multiple dimensions:

- Executive KPI cards for at-a-glance metrics
- Dynamic filters by contract type, tenure, and service
- Churn breakdown by customer segment
- Revenue impact analysis by cohort

This dashboard serves as both an analytical tool and a stakeholder communication platform, allowing leadership to explore data and validate recommendations.

NEXT STEPS

Limitations & Future Enhancements

Descriptive Analysis & Predictive Models

Current analysis is diagnostic, identifying correlations and patterns. Predictive modeling is recommended to forecast churn before it occurs.

Behavioral Data Integration

Current analysis uses transactional and demographic data. Integrating usage patterns and engagement metrics would provide deeper insights.

Causal Analysis

Further investigation needed to determine causation vs. correlation (e.g., does high pricing cause churn, or do price-sensitive customers self-select into month-to-month plans?).

Real-Time Monitoring

Automated dashboards for continuous churn tracking and early warning systems would enable proactive intervention.

Project Impact

Quantified Business Problem Problem

Identified 26.54% churn rate affecting $139K in annual revenue, establishing clear ROI for retention initiatives.

Segment-Level Insights

Pinpointed high-risk customer groups (new customers, month-to-month, high-charge) enabling targeted interventions.

Actionable Roadmap

Delivered four strategic recommendations with estimated impact (5-8% churn reduction potential).

Ishwari Wankhade | Data Analyst | End-to-End Analytics: Data Cleaning, KPI Analysis, Dashboard Design, Business Recommendations