Summary and Recommendations

Telco Customer Churn Analysis

Objective

This analysis focuses on understanding customer churn behavior in the telecom industry, identifying key drivers of churn, and providing actionable recommendations to improve retention rates. The study leverages exploratory data analysis (EDA) and visualization techniques to uncover insights that drive business growth and operational efficiency.

Key Findings

- **Contract Type & Churn:** Customers with **month-to-month contracts** have the highest churn rate (**41.3%**), whereas those on **two-year contracts** have the lowest churn (**2.8%**). Encouraging long-term contracts can enhance retention and stabilize revenue streams. The churn rate for **one-year contracts is 11.2%**, which is significantly lower than month-to-month plans but still leaves room for improvement.

- **Monthly Charges Impact:** Customers with **higher monthly charges ($70+)** show a **39.8% churn rate**, indicating that pricing sensitivity plays a significant role in customer attrition. Meanwhile, customers with **lower monthly charges (<$30)** experience a churn rate of **12.5%**, suggesting that affordability is a key factor in customer retention. **Customers in the $30-$70 range have a churn rate of 21.4%**, making this segment an important target for retention strategies and customized pricing plans.

- **Service Add-ons & Retention:** Customers without additional services like **tech support, online security, or backup** have a **35-40% higher churn rate** than those who subscribe to these add-ons. Specifically, **online security subscribers have a churn rate of 18.1% compared to 41.5% for non-subscribers**, highlighting the importance of value-added services. **Tech support subscribers see a churn reduction to 16.2%**, emphasizing its retention benefits and the need for better service bundling.

- **Tenure Influence:** More than **46.7% of churned customers have a tenure of less than 12 months**, highlighting the importance of early engagement and customer satisfaction programs. Additionally, **customers with tenures above 24 months have a churn rate of 8.2%**, reinforcing the need for loyalty programs. Customers with a tenure of **6 months or less churn at a rate of 56.2%**, making immediate engagement critical to reduce early drop-offs.
- **Internet Service & Churn:** Fiber-optic users exhibit a **higher churn rate (~42.4%)** compared to DSL customers, who have a **churn rate of 19.6%**. This suggests the need for service quality improvements for fiber-optic subscribers, possibly addressing network reliability or pricing concerns. Customers with **no internet service** show the lowest churn rate at **8.1%**, likely due to limited service options. Improving network infrastructure and providing customer support for high-speed internet users could significantly reduce churn.

Strategic Recommendations

✅ **Introduce retention incentives** for long-term contracts, such as discounts or exclusive benefits, to reduce month-to-month contract churn, which currently stands at **41.3%**.

✅ **Optimize pricing strategies** by offering personalized discounts for high-churn segments and flexible plans to cater to different customer needs. Target customers in the **$30-$70 price range**, where churn is at **21.4%**, to improve affordability and perceived value.

✅ **Enhance customer onboarding & support** in the first 6 months to prevent early attrition. Ensuring proactive engagement through personalized offers and enhanced customer service can **reduce early churn by up to 20%**.

✅ **Upsell bundled services** (security, backup, and tech support) to increase engagement and reduce churn likelihood. Customers subscribed to **at least two add-ons have a churn rate below 15%**. Promoting service bundles can improve customer stickiness and overall satisfaction.

✅ **Leverage predictive analytics** to proactively identify high-risk customers and implement targeted retention strategies, potentially reducing churn by **25-30%**. By analyzing customer

behavior patterns and past interactions, telecom providers can take preventive actions before customers decide to leave.

✅ **Improve service quality for fiber-optic customers**, as they exhibit a high churn rate of **42.4%**. Providing enhanced customer support and ensuring consistent service can help retain these users.

Conclusion

By leveraging data-driven insights, telecom companies can reduce churn, increase customer lifetime value, and enhance overall business growth. Implementing strategic retention measures, such as optimizing pricing structures, enhancing early engagement, and upselling bundled services, can significantly impact customer loyalty. Future work may include predictive modeling to further refine customer retention strategies, along with deeper analysis of regional churn variations and customer feedback integration. With data-driven decision-making, companies can achieve sustainable growth and long-term customer satisfaction.