Telecom Customer Churn Analysis

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Objective :
This project seeks to identify the most important determinants of **customer churn** in a telecommunications firm. Analyzing customer demographic, payment profile, contract category, and length of stay will help identify key insights to inform **customer retention initiatives**.

###**Key Insights**

####Contract Type & Churn
- **Month-to-month** contracts experience the highest churn (**42%**).
- **One-year** and **two-year** contracts reduce churn to **11%** and **3%** respectively.
???? Longer contracts foster loyalty and decrease churn.

Payment Methods & Churn
- Users of **electronic checks** exhibit a **45% churn rate**.
- Consumers with **credit card**, **bank transfer**, and **mailed check** accounts have lower churn rates (**15–18%**).
???? *Promoting secure, stable payment methods could enhance retention.*

Tenure & Churn
- *< 1 year* tenure = **50% churn**
- *1–3 years* = **35%**
- *> 3 years* = **15%**
Target retention campaigns in the initial year when customers are most likely to churn.

Internet Service Type
- Fiber Optic subscribers churn at 30%, while DSL subscribers churn at 20%.
Look into satisfaction and reliability issues with Fiber service.

Senior Citizens
- Senior Citizens (65+) churn at 41%, compared to 26% for non-seniors.
Implement personalized retention initiatives for seniors.

Visualizations & Insights
- Bar charts, stacked plots, and line graphs visually emphasize churn distribution by tenure, payment types, and customer segments.
- Data-driven storytelling identifies high-risk segments for proactive targeting.

Recommendations
- **Encourage long-term contracts to increase commitment.
- **Encourage trusted payment channels to mitigate electronic check-related churn.
- **Improve early-stage customer experience particularly in the first year.
- **Roll out targeted support for elderly citizens to enhance satisfaction
and turnover reduction.

Conclusion
This project shows how in-depth analysis of customer behavior
and trends can empower telecom providers to employ smarter, data-driven retention strategies. By determining where and
why customers churn, companies can convert insight into action increasing both satisfaction and lifetime value.