

# Summary

## Customer Churn Analysis

This analysis explores customer churn patterns in a telecom company, identifying key factors influencing customer retention and attrition. The dataset comprises **7,043 customers** with demographic, service, and billing-related attributes. The goal is to uncover trends that can help reduce churn and improve customer satisfaction.

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## Key Findings

### 1. Overall Churn Rate

- **26.4% of customers have churned** (approximately 1,857 out of 7,043).
- **73.6% of customers remain active**, highlighting a retention opportunity.

### 2. Demographic Insights

- **Senior Citizens are more likely to churn:**
  - **42% of senior citizens** have churned, compared to **23% of non-senior customers**.
  - Indicates that elderly customers may require better service support or tailored offers.
- **Customers with dependents are more loyal:**
  - Churn rate for customers **without dependents is 32%**, while for those **with dependents, it is only 17%**.

### 3. Service-Related Factors

- **Internet Service Type:**
  - **Fiber optic users have the highest churn rate at 30%**, compared to **DSL users at 20%**.
  - Customers without internet service have the lowest churn rate (**8%**), likely because they rely more on phone services.
- **Additional Service Subscriptions Reduce Churn:**
  - Customers **without Tech Support, Online Security, or Backup Services** have a **churn rate of 40%**.
  - Those **who subscribe to these services** have a **significantly lower churn rate (~15-20%)**.

### 4. Contract Type & Churn Behaviour

- **Contract length strongly influences churn:**

- **Monthly contract holders churn at 45%**, compared to **10% for one-year contracts** and **3% for two-year contracts**.
- Customers with longer commitments are less likely to leave, suggesting contract incentives could improve retention.
- **Paperless Billing & Churn:**
  - Customers with paperless billing **churn at 35%**, while those receiving paper bills **churn at only 18%**.
  - This suggests digital payment experiences might need improvement.

## 5. Payment Methods & Churn

- **Electronic payment methods (e.g., credit cards, e-wallets) show higher churn at 40%**, compared to bank transfers or mailed checks (15-20%).
  - Customers preferring **automatic payments tend to leave more often**, possibly due to billing transparency issues or dissatisfaction with recurring charges.
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## Conclusion & Recommendations

- 1. Reduce churn among senior citizens** by offering personalized service plans, better support, and loyalty discounts.
- 2. Promote bundled service packages** (Online Security, Backup, and Tech Support) to increase retention.
- 3. Encourage customers to switch from monthly to annual or two-year contracts** by offering discounts or loyalty perks.
- 4. Improve digital payment experiences** by enhancing billing transparency and offering more flexible payment options.
- 5. Address fiber optic churn issues** by improving service reliability, offering better pricing, or adding customer incentives.

By implementing these strategies, the company can **increase retention, enhance customer satisfaction, and reduce churn rates significantly**.