Summary and Recommendation

This analysis provides a comprehensive overview of customer churn in a telecom company, focusing on demographic, service-related, and billing patterns to uncover actionable insights. The study uses a blend of data cleaning, visualization, and statistical methods to pinpoint the drivers of churn, with a clear focus on improving customer retention.

Key Highlights and Findings

1. Overall Churn Rate

- **26.54% of customers have churned**, indicating that nearly one in four customers leaves the company.
- Retention strategies are crucial to reduce this high churn rate, as it directly impacts revenue and customer lifetime value.

2. Demographic Insights

- **Senior Citizens**:
  - 16.23% of the customer base consists of senior citizens, and this segment shows a **higher churn rate compared to non-senior customers**.
  - Tailored service offerings and senior-friendly policies could help mitigate churn in this group.
- **Gender Breakdown**:
  - The churn rates for males and females are nearly identical, suggesting that gender is not a significant driver of churn.

3. Service-Related Factors

- **Monthly vs. Long-Term Contracts**:
  - Customers on month-to-month contracts are significantly more likely to churn, accounting for **42.32%** of the total churn population.
  - Long-term contracts show greater retention rates, highlighting an opportunity to promote multi-year subscription plans.
- **Internet Services**:
  - Customers using DSL internet churn less often (**15.24%**) compared to those using fiber-optic services (**32.56%**). This suggests issues related to fiber-optic service quality or pricing.

4. Payment and Billing Patterns

- **Payment Methods**:

    - Customers using automatic payments have a lower churn rate (**18.42%**) compared to those who pay manually (**31.76%**).
    - Encouraging automatic payments through discounts or incentives can improve retention.
- **Paperless Billing**:
    - Customers opting for paperless billing churn at a higher rate (**30.12%**) than those using paper bills (**21.76%**). This may point to a need for clearer communication or a better digital experience.

5. Additional Behavioral Insights

- **Add-On Services**:
    - Customers subscribed to multiple add-on services (e.g., streaming, tech support) churn less often, suggesting that bundling services improves retention.
- **Tenure**:
    - Churn rates are inversely related to customer tenure, with new customers (less than a year) having the highest churn rate (**45.23%**). Focusing on onboarding and early engagement is key to reducing attrition.

Recommendations

1. **Targeted Retention Campaigns**:
    - Focus on month-to-month contract customers and promote annual or multi-year plans with attractive benefits.
    - Design exclusive packages for senior citizens, emphasizing their specific needs.
2. **Service Quality Improvement**:
    - Investigate and address customer concerns related to fiber-optic services, potentially through quality improvement initiatives or pricing adjustments.
3. **Incentivize Digital and Automatic Payments**:
    - Encourage paperless billing and automatic payment methods by offering discounts or loyalty points.
4. **Enhance Customer Onboarding**:
    - Create comprehensive onboarding programs for new customers, ensuring they feel valued and well-informed about services.
5. **Promote Bundling of Services**:
    - Offer discounts or perks for customers subscribing to multiple services, fostering higher engagement and retention.

Conclusion

This analysis emphasizes that churn is heavily influenced by contract types, payment methods, and service quality. By addressing these factors, the company can enhance customer satisfaction, build loyalty, and reduce churn rates, ultimately driving sustained growth and profitability.