

Churn Analysis Report



Summery

PhoneNow, a leading telecommunications company, is facing a significant increase in customer churn. Over the past month, customer subscription cancellations have surged, leading to revenue losses and concerns among senior management. This report provides a detailed analysis of customer churn, identifies key contributing factors, and recommends actionable retention strategies.

Project Objectives

1. Analyze customer churn trends and identify high-risk segments.
2. Evaluate the financial impact of customer churn on revenue.
3. Develop data-driven retention strategies to mitigate churn.
4. Implement visualization dashboards for real-time tracking of customer behavior.

Provide actionable recommendations for internal stakeholders

Stakeholders

Primary Stakeholders

- Retention Manager (Janet): Needs insights on churn trends to implement retention strategies.
- Marketing Team: Requires segmentation data to optimize engagement campaigns.
- Customer Support Team: Needs insights into pain points to improve customer experience.
- Finance Team: Requires financial impact assessments for strategic planning.
- Executive Leadership: Needs high-level insights to make strategic business decisions.

External Stakeholders

- Customers: Users of phonenow's services and the focus of retention strategies.

Dataset

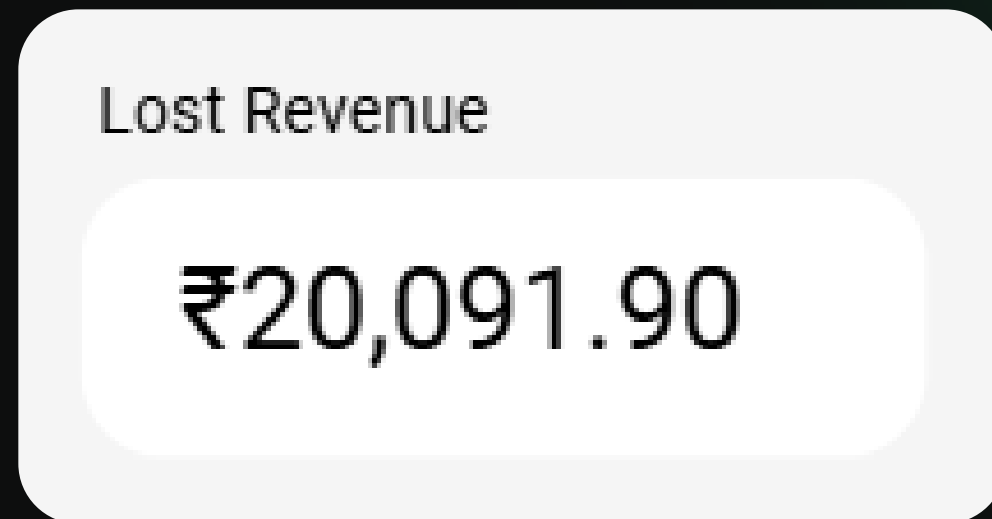
The ETL process was carried out as follows:

- Extract: The data was imported from an Excel file.
- Transform: No corrections or modifications were made to maintain data integrity.
- Load: The dataset was seamlessly integrated into Looker Studio for analysis.

Following the ETL process, Exploratory Data Analysis (EDA) was conducted in Looker Studio utilizing multiple interactive visualizations. These insights provided a comprehensive understanding of customer behavior, trends, and key business metrics.

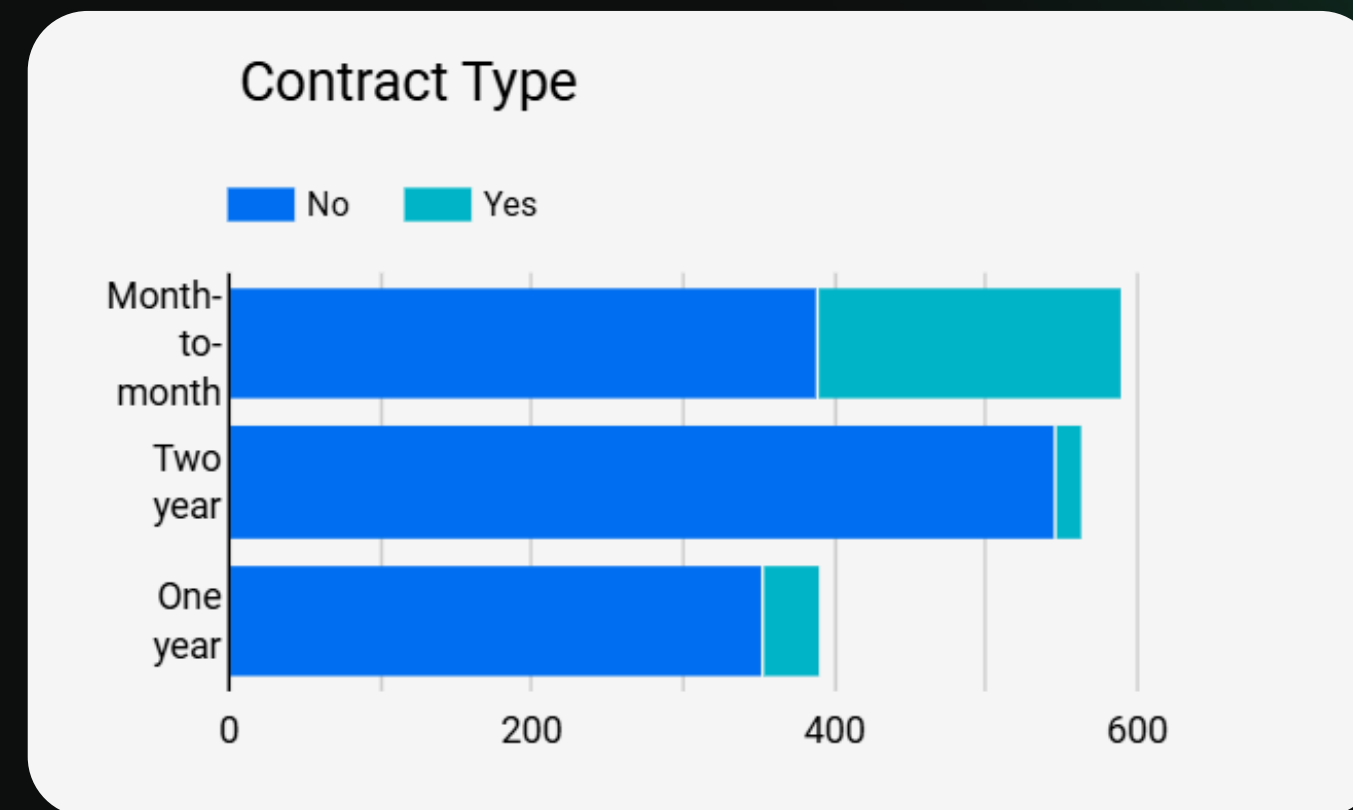
| customerID | gender | Senior Citizen | Partner | Dependents | tenure | Phone Service | Multiple Lines | Internet Service | Online Security | Online Backup | Device Protection | Tech Support | Streaming TV | Streaming Movies | Contract | Paperless Billing | Payment Method | Monthly Charges | Total Charges | numAdm Tickets | numTech Tickets | Churn |
|------------|--------|----------------|---------|------------|--------|---------------|------------------|------------------|-----------------|---------------|-------------------|--------------|--------------|------------------|----------------|-------------------|---------------------------|-----------------|---------------|----------------|-----------------|-------|
| 7590-VHVEG | Female | 0 | Yes | No | 1 | No | No phone service | DSL | No | Yes | No | No | No | No | Month-to-month | Yes | Electronic check | 29.85 | 29.85 | 0 | 0 | No |
| 5575-GNVDE | Male | 0 | No | No | 34 | Yes | No | DSL | Yes | No | Yes | No | No | No | One year | No | Mailed check | 56.95 | 1889.5 | 0 | 0 | No |
| 3668-QPYBK | Male | 0 | No | No | 2 | Yes | No | DSL | Yes | Yes | No | No | No | No | Month-to-month | Yes | Mailed check | 53.85 | 108.15 | 0 | 0 | Yes |
| 7795-CFOCW | Male | 0 | No | No | 45 | No | No phone service | DSL | Yes | No | Yes | Yes | No | No | One year | No | Bank transfer (automatic) | 42.3 | 1840.75 | 0 | 3 | No |
| 9237-HQITU | Female | 0 | No | No | 2 | Yes | No | Fiber optic | No | No | No | No | No | No | Month-to-month | Yes | Electronic check | 70.7 | 151.65 | 0 | 0 | Yes |
| 9305-CDSKC | Female | 0 | No | No | 8 | Yes | Yes | Fiber optic | No | No | Yes | No | Yes | Yes | Month-to-month | Yes | Electronic check | 99.65 | 820.5 | 0 | 0 | Yes |
| 1452-KIOVK | Male | 0 | No | Yes | 22 | Yes | Yes | Fiber optic | No | Yes | No | No | Yes | No | Month-to-month | Yes | Credit card (automatic) | 89.1 | 1949.4 | 0 | 0 | No |
| 6713-OKOMC | Female | 0 | No | No | 10 | No | No phone service | DSL | Yes | No | No | No | No | No | Month-to-month | No | Mailed check | 29.75 | 301.9 | 0 | 0 | No |
| | | | | | | | | | | | | | | | Month | | | | | | | |

What is the total revenue lost due to churn in the last month



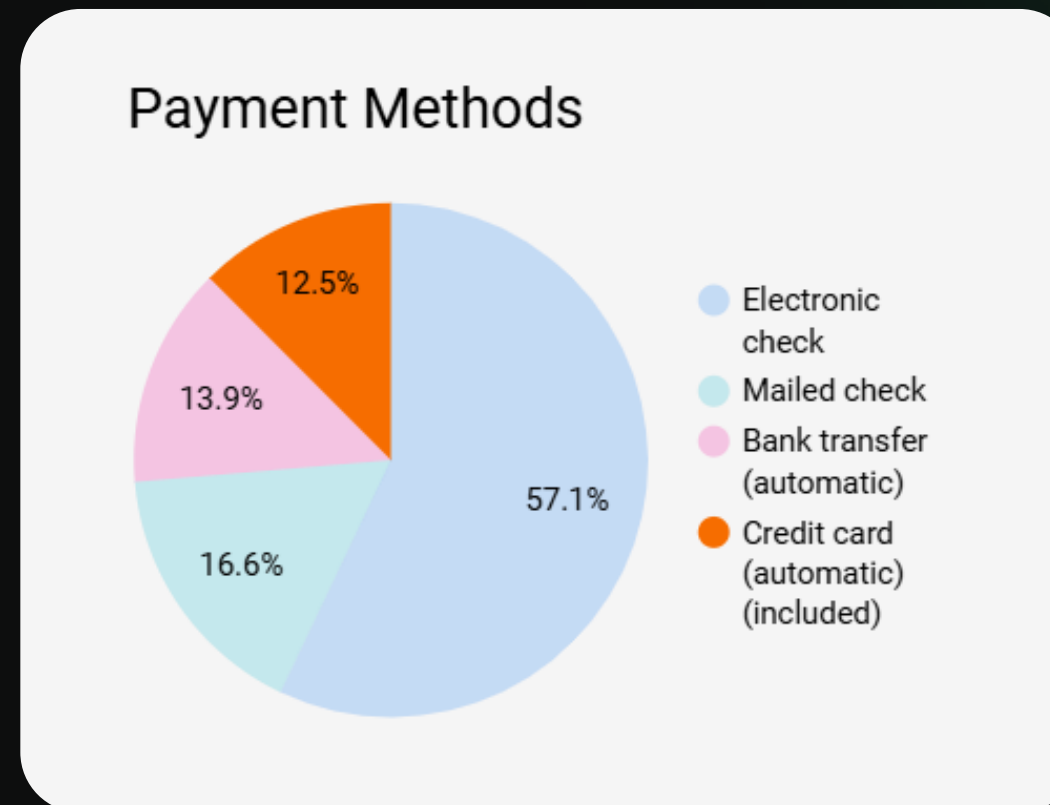
- Hint: Use a metric to calculate the total MonthlyCharges for churned customers (Churn = Yes).
- How it helps: Quantifies the financial impact of churn and highlights the urgency of retention strategies.
- Business Impact: Guides the prioritization of customer retention efforts to recover lost revenue.

Which customer segment shows the highest churn rate based on contract type



- Hint: Use a stacked bar chart to compare Contract and Churn.
- How it helps: Highlights which contract types (e.g., month-to-month, annual) need immediate attention.
- Business Impact: Helps design tailored contract options to improve retention.
-

How churn vary by payment method



- **Hint:** Use a pie chart to compare the distribution of churned customers across PaymentMethod.
- **How it helps:** Identifies payment preferences that may contribute to churn.
- **Business Impact:** Guides improvements in payment options to reduce dissatisfaction.

What is the average tenure of churn customer

customerID

17.98

- **Hint:** Use a pie chart to compare the distribution of churned customers across PaymentMethod.
- **How it helps:** Identifies payment preferences that may contribute to churn.
- **Business Impact:** Guides improvements in payment options to reduce dissatisfaction.

What is the average tenure of churned customer?

| | Onlin... | TechSu... | customerID ▾ |
|----|------------|---------------|--------------|
| 1. | No | No | 1,275 |
| 2. | No inte... | No interne... | 779 |
| 3. | Yes | Yes | 532 |
| 4. | No | Yes | 485 |
| 5. | Yes | No | 460 |

1 - 5 / 5 < >

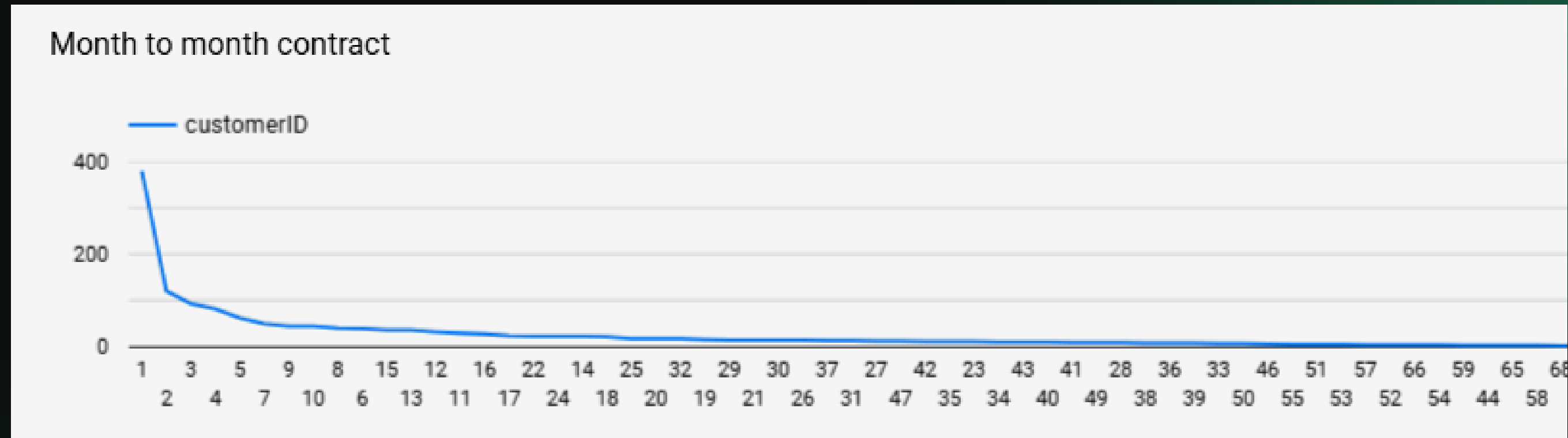
- **Hint:** Use a pie chart to compare the distribution of churned customers across PaymentMethod.
- **How it helps:** Identifies payment preferences that may contribute to churn.
- **Business Impact:** Guides improvements in payment options to reduce dissatisfaction.

What is the churn rate for customers with fiber optic internet

| | Onlin... | TechSu... | customerID ▼ |
|----|----------|-----------|--------------|
| 1. | No | No | 971 |
| 2. | No | Yes | 143 |
| 3. | Yes | No | 130 |
| 4. | Yes | Yes | 53 |

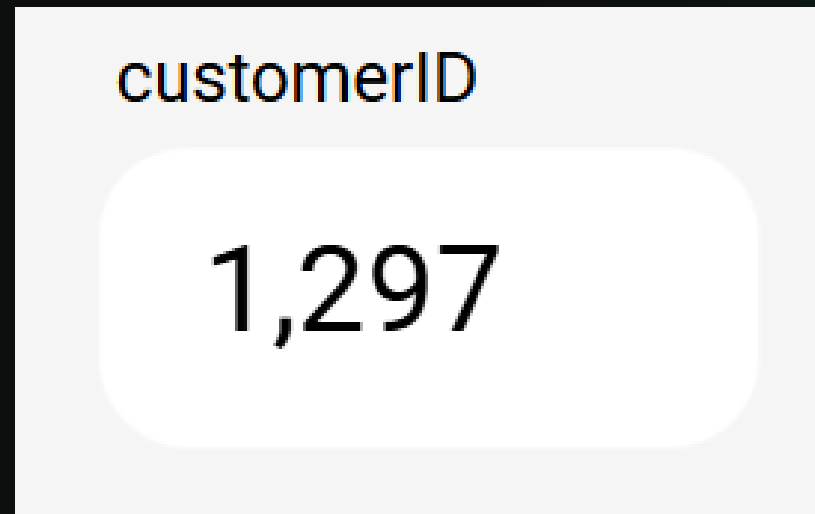
- **Hint:** Use a table visualization for service usage (e.g., OnlineSecurity, TechSupport, etc.) filtered by Churn = Yes.
- **How it helps:** Highlights underutilized services that could be contributing to dissatisfaction.
- **Business Impact:** Informs service improvement initiatives and upselling strategies.

Which services are least popular among churned customers?



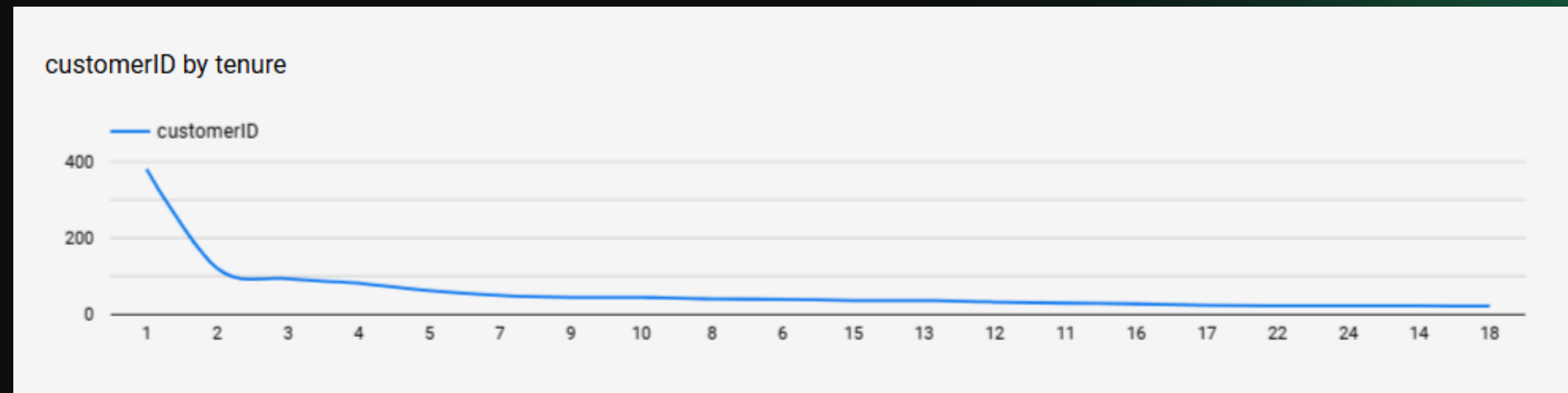
- Hint: Use a table visualization for service usage (e.g., OnlineSecurity, TechSupport, etc.) filtered by Churn = Yes.
- How it helps: Highlights underutilized services that could be contributing to dissatisfaction.
- Business Impact: Informs service improvement initiatives and upselling strategies.

What is the churn rate for customers with Fiber Optic internet?



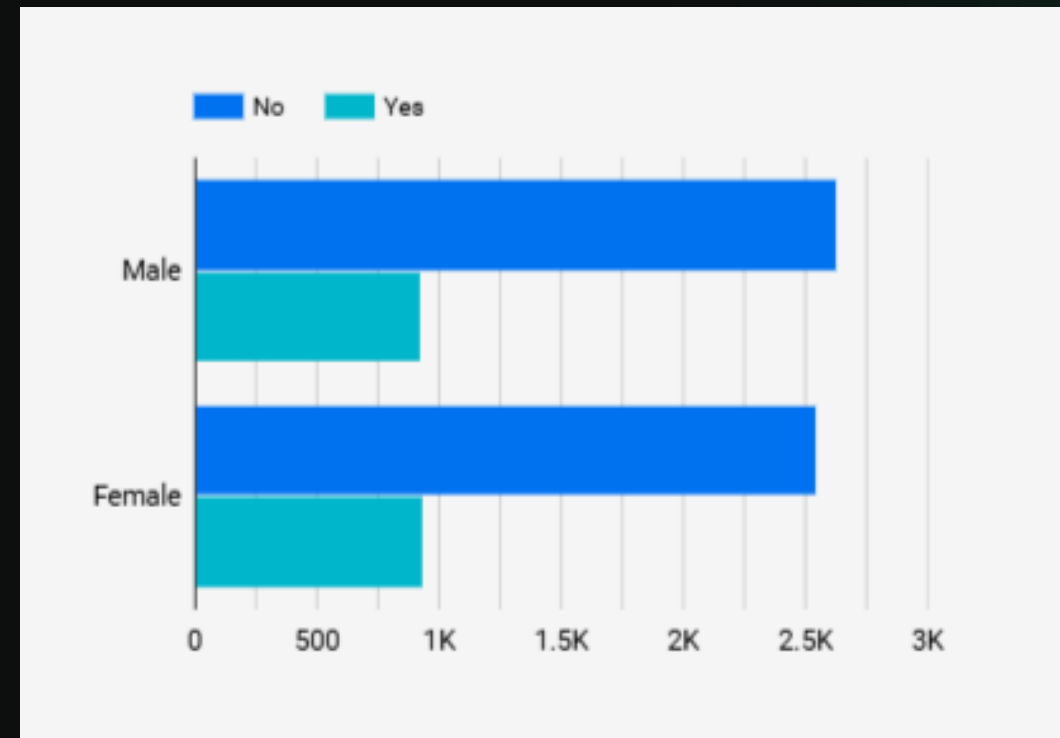
- **Hint:** Use a KPI card to calculate the churn percentage for InternetService = Fiber optic.
- **How it helps:** Assesses the impact of specific internet services on churn.
- **Business Impact:** Helps refine product offerings to improve satisfaction and reduce churn.

What is the churn trend for customers with month-to-month contracts?



- **Hint:** Use a line chart filtered by Contract = Month-to-month.
- **How it helps:** Tracks trends for flexible contracts and identifies patterns over time.
- **Business Impact:** Helps target short-term contract customers with retention offers.

which demographic are most likely to churn



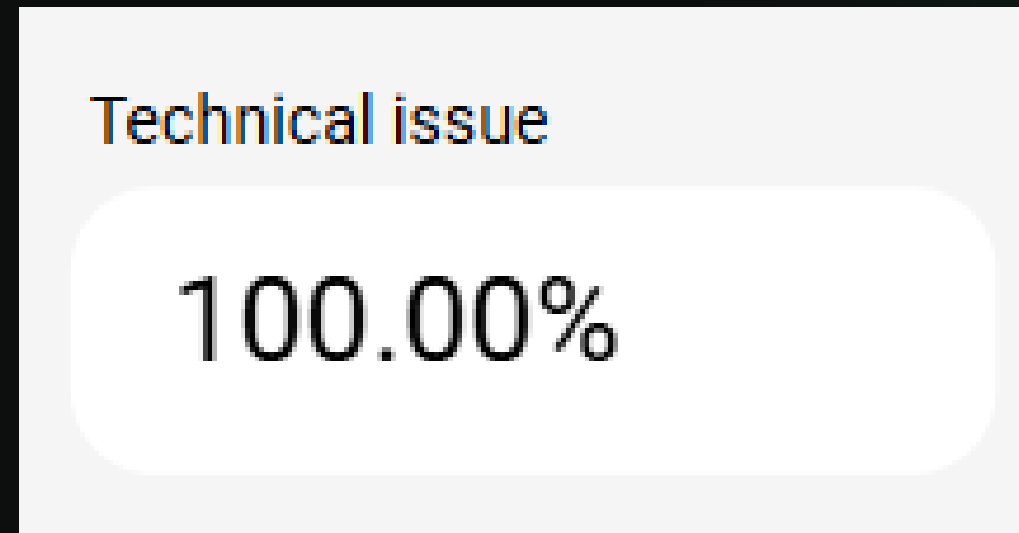
- **Hint:** Use a clustered column chart for churn across Gender, SeniorCitizen, and Dependents.
- **How it helps:** Reveals trends among key customer segments for targeted engagement.
- **Business Impact:** Supports demographic-based marketing campaigns to reduce churn.

what percentage of churned customers had unresolved technical issue

Customer with tech issue
704300.0%

- **Hint: Use a calculated field for churned customers with non-zero numTechTickets.**
- **How it helps: Quantifies the role of tech support in churn.**
- **Business Impact: Encourages investments in customer support to improve satisfaction.**

What is the churn rate for customer who do not use online security service.



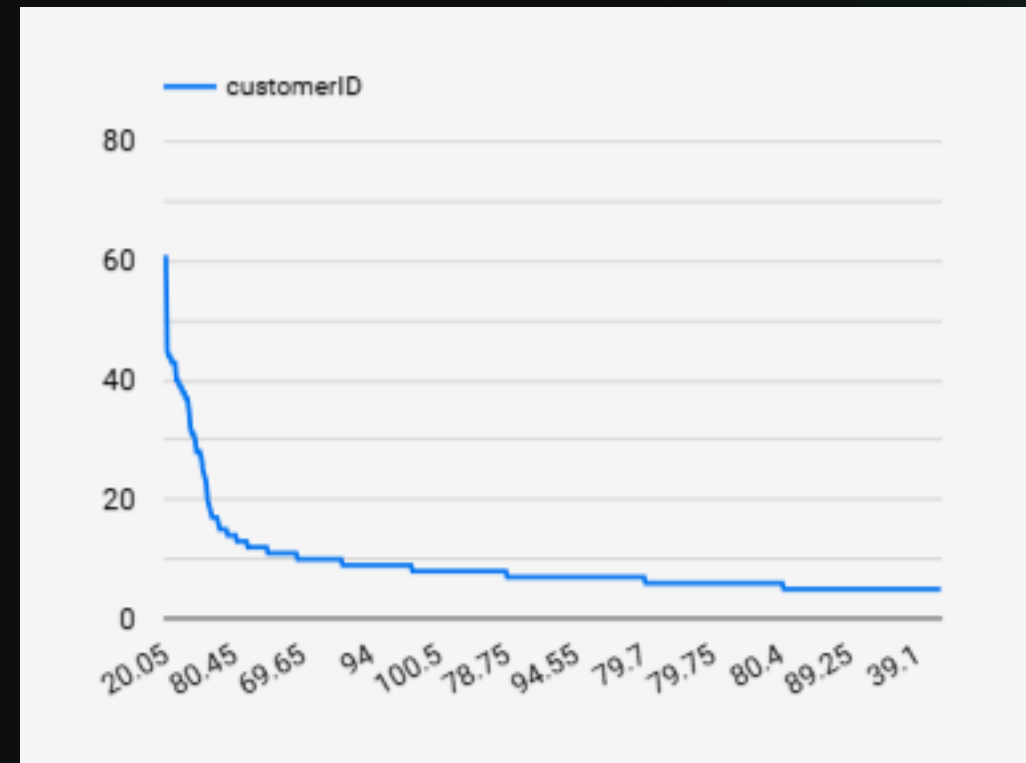
- **Hint:** Use a calculated field for churned customers with non-zero numTechTickets.
- **How it helps:** Quantifies the role of tech support in churn.
- **Business Impact:** Encourages investments in customer support to improve satisfaction.

what is the total number of high risk customers with month to month contracts and no add ons

| | Contract | Onlin... | TechSu... | customerID ▾ |
|----|----------------|------------|---------------|--------------|
| 1. | Month-to-month | No | No | 1,168 |
| 2. | Month-to-month | Yes | No | 165 |
| 3. | Month-to-month | No | Yes | 158 |
| 4. | Month-to-month | No inte... | No interne... | 99 |
| 5. | Month-to-month | Yes | Yes | 48 |

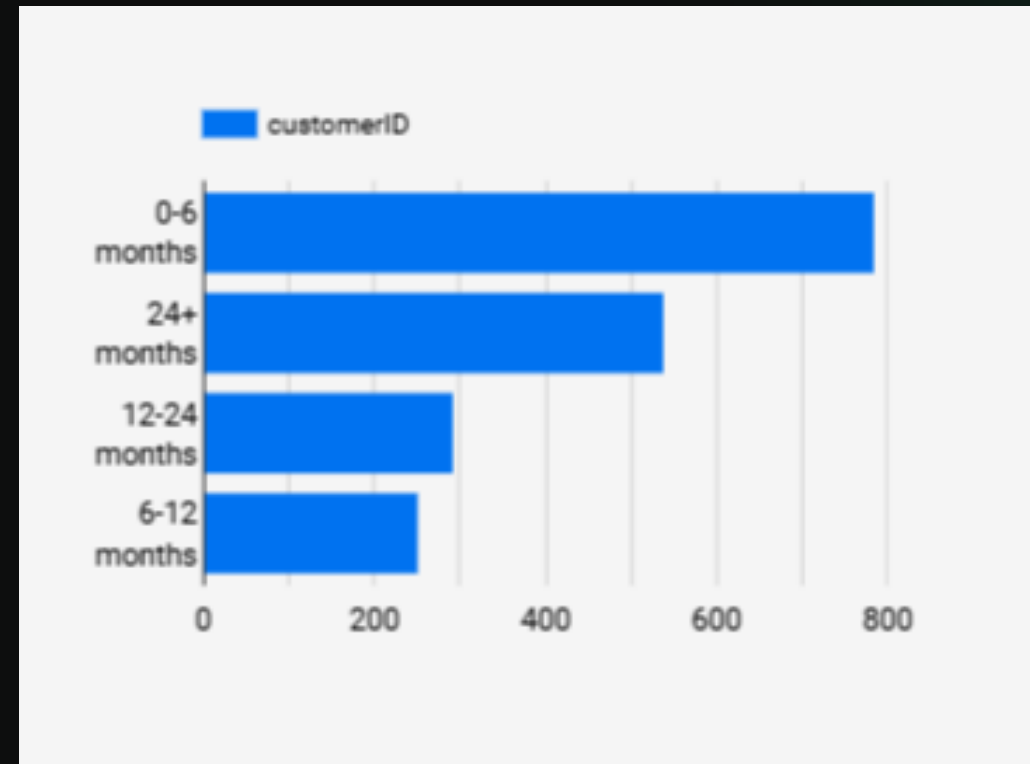
- **Hint: Combine filters for Contract = Month-to-month and absence of addons (e.g., OnlineSecurity = No).**
- **How it helps: Identifies the most vulnerable customer group for targeted retention strategies.**
- **Business Impact: Helps focus on a specific segment to maximize retention efforts.**

Whats is the churn trend by monthly charges



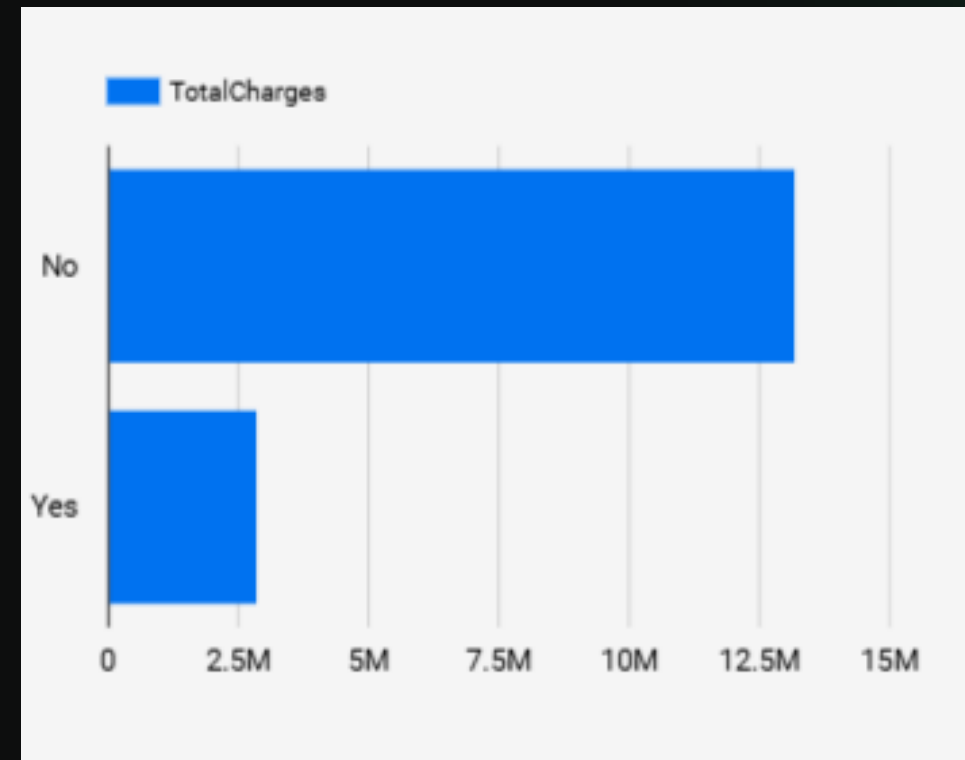
- Hint: Combine filters for Contract = Month-to-month and absence of addons (e.g., OnlineSecurity = No).
- How it helps: Identifies the most vulnerable customer group for targeted retention strategies.
- Business Impact: Helps focus on a specific segment to maximize retention efforts.

what is the distribution of churn by tenure group



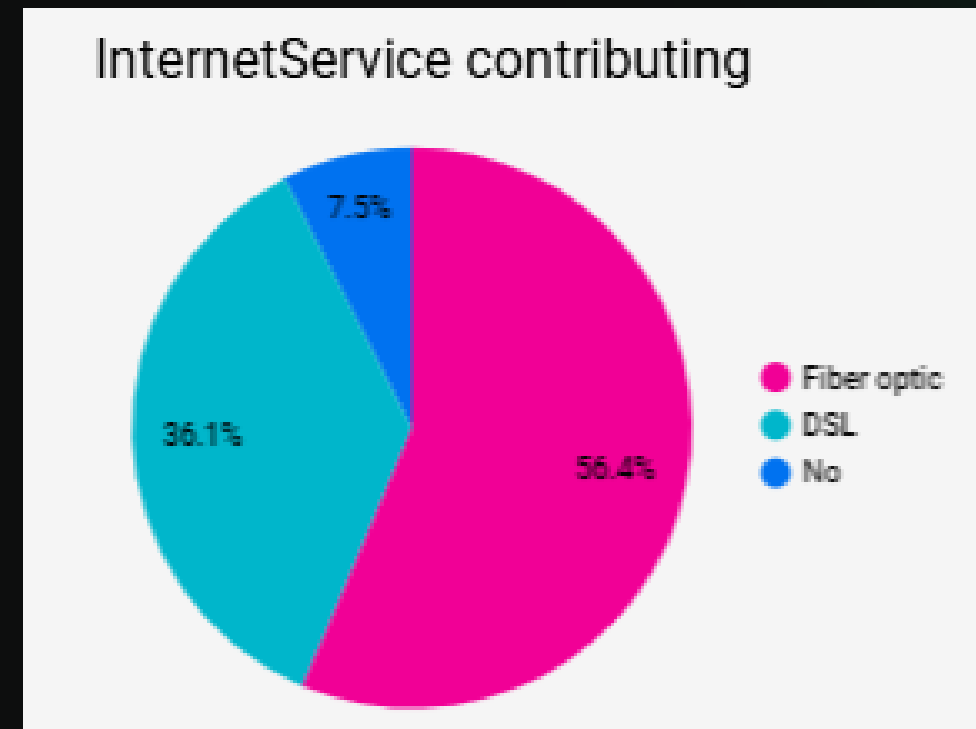
- **Hint:** Create a bar chart to analyze churn across tenure intervals (e.g., 0–12 months, 13–24 months).
- **How it helps:** Reveals tenure periods with the highest churn, highlighting where retention efforts should focus.
- **Business Impact:** Helps implement early-stage engagement strategies to reduce churn in the initial customer lifecycle.

Which internet service type generates the most revenue?



- **Hint:** Use a column chart to show revenue (TotalCharges) for churned and non-churned customers.
- **How it helps:** Highlights the financial contribution of churned customers and areas of revenue loss.
- **Business Impact:** Informs customer segmentation strategies to protect revenue.

what is the distribution of churn by tenure group



- Hint: Use a pie chart or stacked bar chart to visualize total revenue (TotalCharges) by InternetService.
- How it helps: Identifies which internet service is most profitable and which has the highest churn.
- Business Impact: Supports decisions on prioritizing service improvements for high-revenue segments.

Final Conclusion

The analysis of PhoneNow's customer churn data has provided critical insights into the factors influencing customer behavior and retention. By leveraging Looker Studio, we identified key trends and actionable findings that can guide PhoneNow's strategic decision-making.

1. Key Takeaways:

- **Contract Type:** Customers with month-to-month contracts exhibit the highest churn rates, highlighting the need for more attractive long-term contract options or incentives for short-term customers.
- **Services Impact:** The absence of add-ons like OnlineSecurity and TechSupport significantly correlates with higher churn rates, suggesting an opportunity to upsell these services.
- **Demographics:** Senior citizens and customers without dependents show higher churn tendencies, providing a clear demographic focus for targeted retention campaigns.
- **Payment Preferences:** Customers paying via electronic checks are more likely to churn, indicating potential dissatisfaction with this payment method.
- **Revenue Loss:** The revenue lost due to churn represents a significant financial impact, emphasizing the urgency of customer retention strategies.

Final Conclusion

2. Recommended Actions:

- Retention Campaigns: Implement targeted marketing efforts for at-risk segments, such as customers with short-term contracts or those without additional services.
- Service Enhancements: Focus on improving customer experiences for high-churn services, particularly Fiber Optic Internet and OnlineSecurity.
- Billing and Payments: Offer incentives for customers to switch to more stable payment methods like credit cards or bank transfers.
- Customer Support: Address unresolved technical issues proactively to reduce churn caused by dissatisfaction with support services.

Final Conclusion

3. Strategic Value:

- This dashboard provides an interactive, data-driven approach for PhoneNow to monitor churn trends and evaluate the effectiveness of retention initiatives. The ability to dynamically filter data by demographics, services, and payment preferences ensures stakeholders can make informed decisions in real-time.
- By addressing the root causes of churn, PhoneNow can not only stabilize its customer base but also enhance its brand reputation and profitability. The insights and recommendations provided in this analysis will serve as a roadmap for achieving sustainable customer growth and retention in the competitive telecom market.

Thank You

