Customer Service Data Analysis Report

# Customer Sentiment Analysis

The sentiment distribution in customer interactions is as follows:  
 - Negative: 11,063  
 - Neutral: 8,754  
 - Very Negative: 6,026  
 - Positive: 3,928  
 - Very Positive: 3,170  
   
 The majority of sentiments expressed are negative or neutral.

# Root Cause Analysis

The distribution of common customer complaints is as follows:  
 - Billing Questions: 23,462  
 - Payments: 4,749  
 - Service Outage: 4,730  
   
 Billing questions are the most common reason for customer interactions, indicating a significant focus area for improving customer satisfaction.

# Service Response Time Analysis

The distribution of response times for customer queries is as follows:  
 - Within SLA: 20,625  
 - Below SLA: 8,148  
 - Above SLA: 4,168  
   
 The majority of responses are within the Service Level Agreement (SLA), indicating efficient handling of customer queries. However, there are notable instances where response times are either below or above the SLA.

# Customer Segmentation

Segmentation of customers based on demographics and interaction channels:  
   
 Top 10 Cities:  
 1. Washington: 1,110  
 2. Houston: 657  
 3. New York City: 564  
 4. El Paso: 528  
 5. Dallas: 437  
 6. Atlanta: 416  
 7. Miami: 374  
 8. Sacramento: 341  
 9. Los Angeles: 331  
 10. Kansas City: 327  
   
 Top 10 States:  
 1. California: 3,631  
 2. Texas: 3,572  
 3. Florida: 2,834  
 4. New York: 1,786  
 5. Virginia: 1,164  
 6. Ohio: 1,160  
 7. District of Columbia: 1,110  
 8. Pennsylvania: 1,017  
 9. Georgia: 926  
 10. Illinois: 848  
   
 Interaction Channels:  
 1. Call-Center: 10,639  
 2. Chatbot: 8,256  
 3. Email: 7,470  
 4. Web: 6,576

# Trends and Patterns Identification

Trends in call duration and customer satisfaction score:  
   
 Call Duration:  
 - Mean: 25.02 minutes  
 - Range: 5 to 45 minutes  
   
 CSAT Score:  
 - Mean: 5.55  
 - Range: 1 to 10  
   
 These insights highlight areas for potential improvements in service efficiency and customer satisfaction.

# Conclusion and Recommendations

- Focus on reducing billing-related issues.  
 - Maintain response times within SLA.  
 - Enhance service for top customer segments.  
 - Improve average CSAT scores through targeted initiatives.  
   
 These actions can drive better customer satisfaction and service efficiency.