

Call Centre Data Analysis Project Documentation

Project Overview:

This Call Centre Data Analysis Project provides valuable insights into Call Centre operations, encompassing total calls, durations, customer distribution, and key patterns. The analysis explores variations in call volumes across days, channels, sentiments, reasons, and originating states. Understanding these dynamics is essential for optimizing resource allocation, enhancing customer experience, and addressing prevalent service challenges.

Problem Statements:

Efficient call centre management faces challenges, reflected in variable call volumes and negative sentiments.

Billing-related queries stand out as a common reason for calls. Disparities in call distribution among centres signal potential optimization opportunities.

Addressing these issues is crucial for improving service quality, customer satisfaction, and operational efficiency.

Project Goal:

The primary goal is to optimize call centre efficiency and customer satisfaction.

Balancing call distribution across days and channels, addressing negative sentiments, and prioritizing solutions for common issues like billing queries are key objectives.

Ensuring a more equitable distribution of calls among call centres aims to enhance overall responsiveness and resource utilization.

The project seeks to address these challenges for improved call centre performance.

Steps in Project:

- Requirement Gathering
- Raw Data Overview
- Connecting Data with Power BI
- Data Cleaning
- Data Processing
- Data Modelling
- Data Visualization/ Charts Design
- Report/ Dashboard Building
- Insights

Insights:

➤ **Call Volume Overview (KPIs):**

- Total Calls: 33K
- Total Call Duration: 13.74K hours
- Average Call Duration: 25.02 minutes
- Response Time Percentage: 75%
- Total Customers Engaged: 33K

➤ **Call Distribution Patterns:**

- Days with Highest Call Volume: Thursday and Friday

➤ **Channel-wise Distribution:**

- Call Centre Channel: 11K calls (32%)
- Chatbot: 8K calls (25%)
- Email: 7K calls (22%)
- Web Channel: 7K calls (18%)

➤ **Sentiment Analysis:**

- Negative Sentiment Calls: 11.1K
- Neutral Sentiment Calls: 8.8K
- Very Negative Sentiment Calls: 6K
- Positive Sentiment Calls: 4K

- Very Positive Sentiment Calls: 3.2K
- **Common Reasons for Calls:**
 - Billing-related Queries emerge as the most common reason for calls.
- **Geographical Call Distribution:**
 - Highest call volume from Texas (3572 calls)
 - Second-highest from California (3631 calls)
 - Followed by Florida with 2834 calls
- **Call Centre-wise Performance:**
 - Los Angeles Call Centre received the majority of calls (14K)
 - Baltimore Call Centre ranked second with 11K calls

These insights offer a comprehensive understanding of our call centre operations, highlighting key areas for improvement and optimization. By addressing specific patterns in call distribution, sentiment analysis, and reasons for calls, we aim to enhance customer satisfaction and overall operational efficiency.

Conclusion:

Based on the insights gathered, our call centre operations exhibit a robust performance with a substantial call volume. However, opportunities for improvement lie in addressing prevalent negative sentiments, particularly related to billing queries. The concentration of calls on Thursdays and Fridays suggests potential adjustments in staffing or resource allocation. Moving forward, optimizing response strategies and refining services, especially in high-call-volume regions like Texas and California, will be key to elevating overall call centre efficiency.