

A PROJECT REPORT ON

ABC CALL VOLUME TREND



Submitted By: -
Pritesh Kumar Bag



Trainity

C-97, C-97, Ahinsa Cir, Panch Batti, C Scheme,
Ashok Nagar, Jaipur, Rajasthan 302001

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PROJECT DESCRIPTION

A Customer Experience (CX) team is a group of people in a company dedicated to making sure customers have the best possible experience. They collect information from customers, like feedback and complaints, and use this data to understand what customers want and need. By analyzing this data, the CX team figures out ways to improve products, services, and overall customer satisfaction. They share these insights with the company so that everyone can work together to make things better for customers. Agents, adept in communication and product knowledge, handle diverse inquiries, aiming to engage, resolve issues, and leave a lasting positive impression. Today, the landscape sees an integration of AI-powered tools such as Interactive Voice Response (IVR), Robotic Process Automation (RPA), Predictive Analytics, and Intelligent Routing to elevate the customer experience. Customer Experience (CX) team data analysis enables businesses to evaluate the performance of their customer support representatives. It helps in assessing metrics like average handling time, first call resolution rates, customer satisfaction scores, and more. By identifying areas where agents excel or struggle, companies can provide targeted training, support, or resources to enhance their team's efficiency and effectiveness. In this project, we will be using your analytical skills to understand the trends in the call volume of the CX team and derive valuable insights from it.

APPROACH

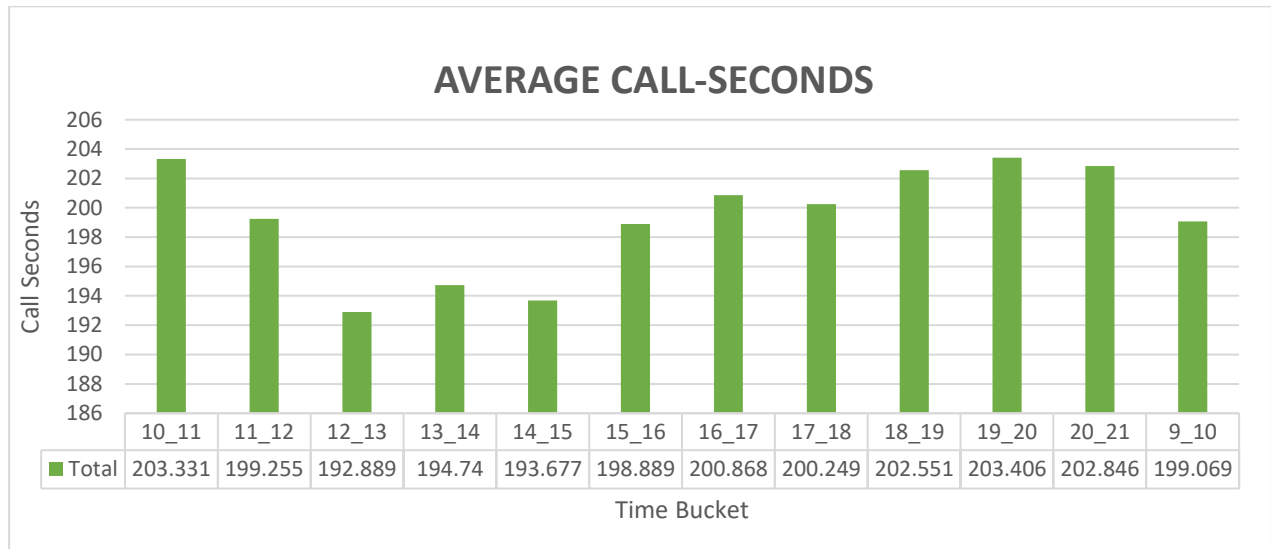
- Downloaded the given datafile
- Understanding the datafile
- Checking the blanks and outliers
- Removing unwanted data
- Drawing summary from the data
- Used formulas, pivot table and charts

TECH STACK USED

- Microsoft Excel 2016
- Link Excel-https://docs.google.com/spreadsheets/d/1NHqMiR_klwFOXJAShU3nMkUm-O-gIn/edit?usp=drive_link&oid=109940108743911589080&rtpof=true&sd=true

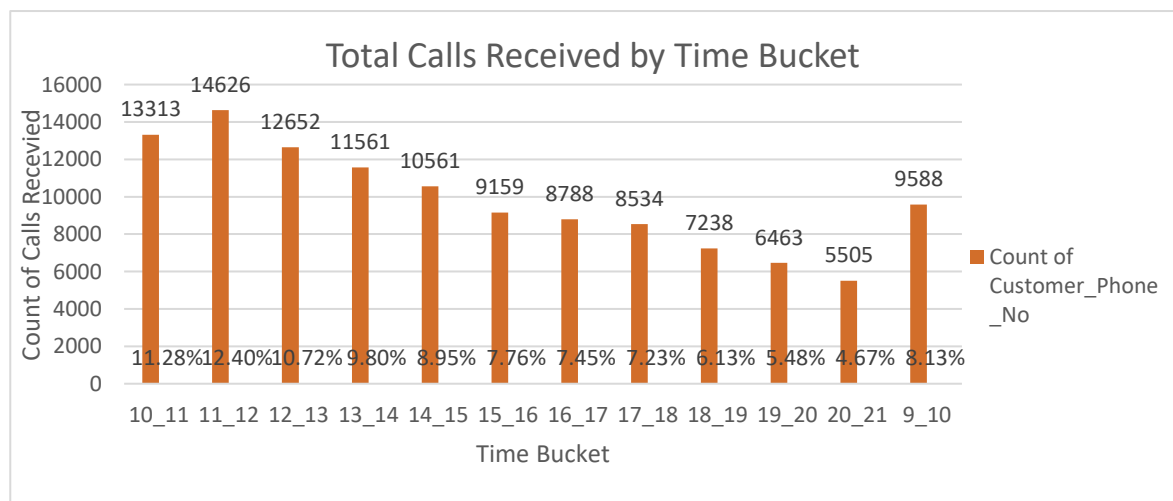
INSIGHTS

1. **Average Call Duration:** Determine the average duration of all incoming calls received by agents. This should be calculated for each time bucket. Your Task: What is the average duration of calls for each time bucket?



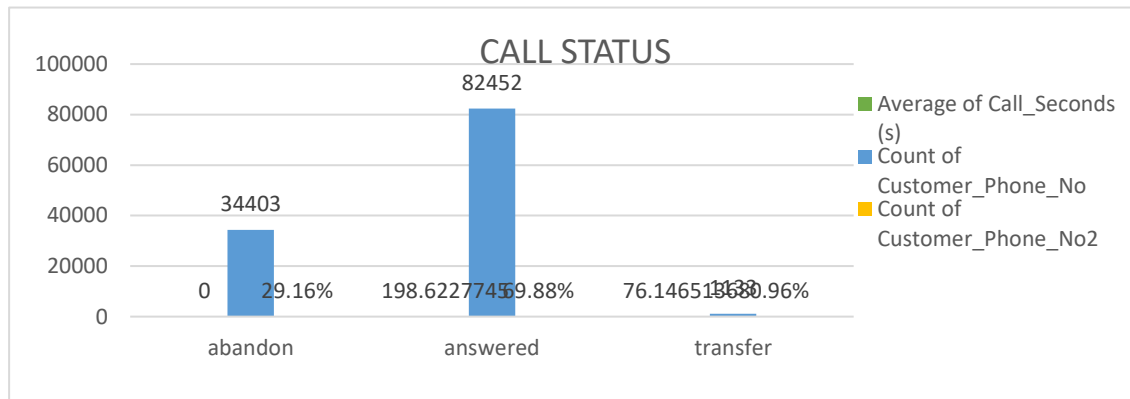
Interpretation- The total average call duration was 198.62. The call duration on the second half of the day was relatively high.

2. **Call Volume Analysis:** Visualize the total number of calls received. This should be represented as a graph or chart showing the number of calls against time. Time should be represented in buckets (e.g., 1-2, 2-3, etc.). **Your Task:** Can you create a chart or graph that shows the number of calls received in each time bucket?



Interpretation- The maximum calls were received on morning 9am to 1pm and gradually decreased. Then the calls received most between

3. **Manpower Planning:** The current rate of abandoned calls is approximately 30%. Propose a plan for manpower allocation during each time bucket (from 9 am to 9 pm) to reduce the abandon rate to 10%. In other words, you need to calculate the minimum number of agents required in each time bucket to ensure that at least 90 out of 100 calls are answered. **Your Task:** What is the minimum number of agents required in each time bucket to reduce the abandon rate to 10%?



| Row Labels | Sum of Call_Seconds (s) | Sum of hour | | |
|-------------|---------------------------|----------------------------|----------------------------|----------------|
| Grand Total | 676664 | 187.9622222 | | |
| | total agent for 60 % | 37.59244444 | | |
| | agent required for 90% | 57 | | |
| Row Labels | Count of Call_Seconds (s) | Count of Call_Seconds (s)2 | Count of Call_Seconds (s)2 | Agent Required |
| 10_11 | 13313 | 11.28% | 0.11 | 6 |
| 11_12 | 14626 | 12.40% | 0.12 | 7 |
| 12_13 | 12652 | 10.72% | 0.11 | 6 |
| 13_14 | 11561 | 9.80% | 0.10 | 6 |
| 14_15 | 10561 | 8.95% | 0.09 | 5 |
| 15_16 | 9159 | 7.76% | 0.08 | 4 |
| 16_17 | 8788 | 7.45% | 0.07 | 4 |
| 17_18 | 8534 | 7.23% | 0.07 | 4 |
| 18_19 | 7238 | 6.13% | 0.06 | 3 |
| 19_20 | 6463 | 5.48% | 0.05 | 3 |
| 20_21 | 5505 | 4.67% | 0.05 | 3 |
| 9_10 | 9588 | 8.13% | 0.08 | 5 |
| (blank) | | 0.00% | 0.00 | 0 |
| Grand Total | 117988 | 100.00% | 100% | 57.00 |
| DATE | 01 January 2022 | | | |
| Row Labels | Sum of Call_Seconds (s) | | | |
| 09 | 35313 | | | |
| 10 | 53087 | | | |
| 11 | 67751 | | | |
| 12 | 72680 | | | |
| 13 | 59693 | | | |
| 14 | 76137 | | | |
| 15 | 65689 | | | |
| 16 | 59464 | | | |
| 17 | 68155 | | | |
| 18 | 53096 | | | |
| 19 | 40141 | | | |
| 20 | 25281 | | | |
| 21 | 177 | | | |
| Grand Total | 676664 | | | |

Interpretation- The current rate of abandon call is 30 percent . 57 agents are required to reduce the abandon rate to 10%

4. **Night Shift Manpower Planning:** Customers also call ABC Insurance Company at night but don't get an answer because there are no agents available. This creates a poor customer experience. Assume that for every 100 calls that customers make between 9 am and 9 pm, they also make 30 calls at night between 9 pm and 9 am. The distribution of these 30 calls is as follows: **Your Task:** Propose a manpower plan for each time bucket throughout the day, keeping the maximum abandon rate at 10%.

| | |
|---------------------------|----------|
| Avg calls daily | 5129.913 |
| For night 9pm to 9 am | 1538.974 |
| Additional hour required | 76.17921 |
| additional agent required | 15.23584 |

| TIME BUCKET | CALL DISTRIBUTION | TIME DISTRIBUTION | AGENT REQUIRED | AGENT REQUIRED |
|-------------|-------------------|-------------------|----------------|----------------|
| 9_10 | 3 | 10.00% | 1.5 | 2 |
| 10_11 | 3 | 10.00% | 1.5 | 2 |
| 11_12 | 2 | 6.67% | 1 | 1 |
| 12_1 | 2 | 6.67% | 1 | 1 |
| 1_2 | 1 | 3.33% | 0.5 | 1 |
| 2_3 | 1 | 3.33% | 0.5 | 1 |
| 3_4 | 1 | 3.33% | 0.5 | 1 |
| 4_5 | 1 | 3.33% | 0.5 | 1 |
| 5_6 | 3 | 10.00% | 1.5 | 2 |
| 6_7 | 4 | 13.33% | 2 | 2 |
| 7_8 | 4 | 13.33% | 2 | 2 |
| 8_9 | 5 | 16.67% | 2.5 | 3 |
| TOTAL | 30 | 100.00% | | 19 |

Interpretation- Average calls for night is 1538 which is 30 percent. Additional agents required for 75 hours of night was found out to be 19 when distributed over different time bucket.

RESULTS

- The total average call duration was 198.62. The call duration on the second half of the day was relatively high.
- The maximum calls were received on morning 9am to 1pm and gradually decreased. Then the calls received most between
- The current rate of abandon call is 30 percent. 57 agents are required to reduce the abandon rate to 10%
- -Average calls for night is 1538 which is 30 percent. Additional agents required for 75 hours of night was found out to be 19 when distributed over different time bucket.