

ABC Call Volume Trend Analysis

(Trainity Project-8)



Table of Content:



Description

Approach

Tech-Stack Used

Insights

Result



Understanding
Data

Visualizing
data

Approach

Cleaning
Data

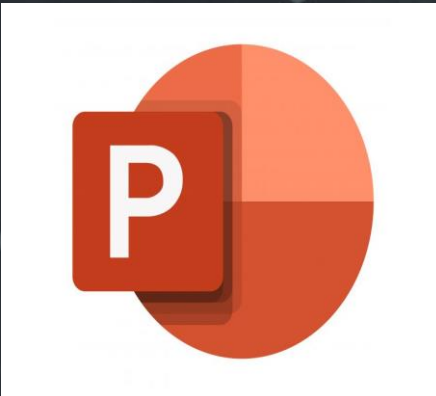
Analyzing
data

Tech-stack Used:



[Microsoft Excel 2016]

-to clean, analyze and
visualize the data



[Microsoft Power-Point]

-to make a report

Data Understanding

Duplicate Values
0

Number Of Rows
1,17,990

Number of Columns
13

Null Values

Wrapped by
47,877

Abnormal Value (#N/A)

Agent Name
34,198

Agent ID
34,198

Assumptions

Working Hour	9
Lunch & Snack time	1.5
Actual working hours	7.5
% of actual working hr spent on call with customer	60%
Total working time (hours)	4.5
Total working time (sec)	16200
Avg Call time (sec) per Agent	199
Agent's call handling capacity per day	81
Agent's call handling capacity per hour	18

Distribution of 30 calls coming in night for every 100 calls coming in between 9am - 9pm (i.e. 12 hrs slot)											
9pm- 10pm	10pm - 11pm	11pm- 12am	12am- 1am	1am - 2am	2am - 3am	3am - 4am	4am - 5am	5am - 6am	6am - 7am	7am - 8am	8am - 9am
3	3	2	2	1	1	1	1	3	4	4	5

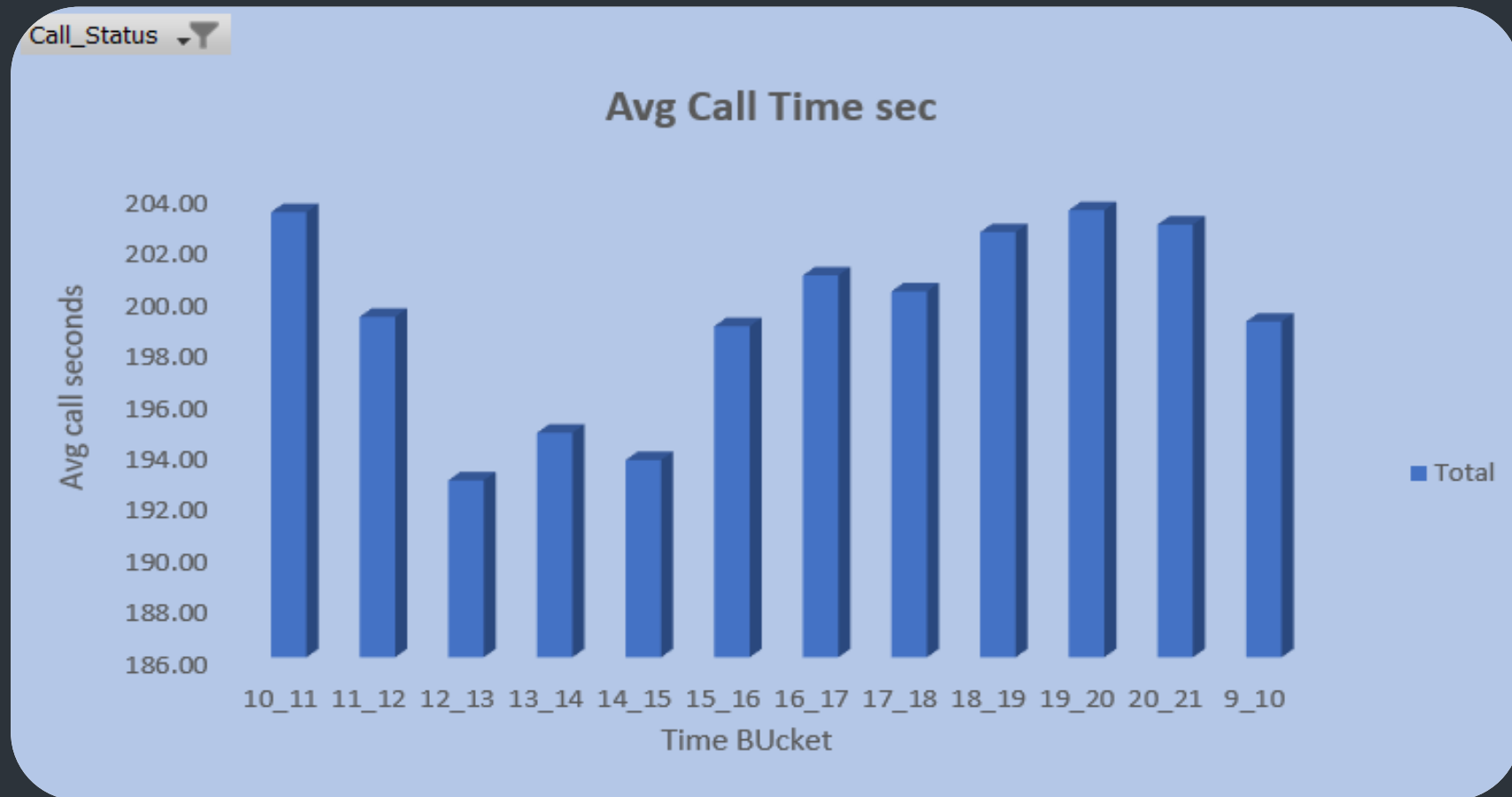


Analysis & Visualization



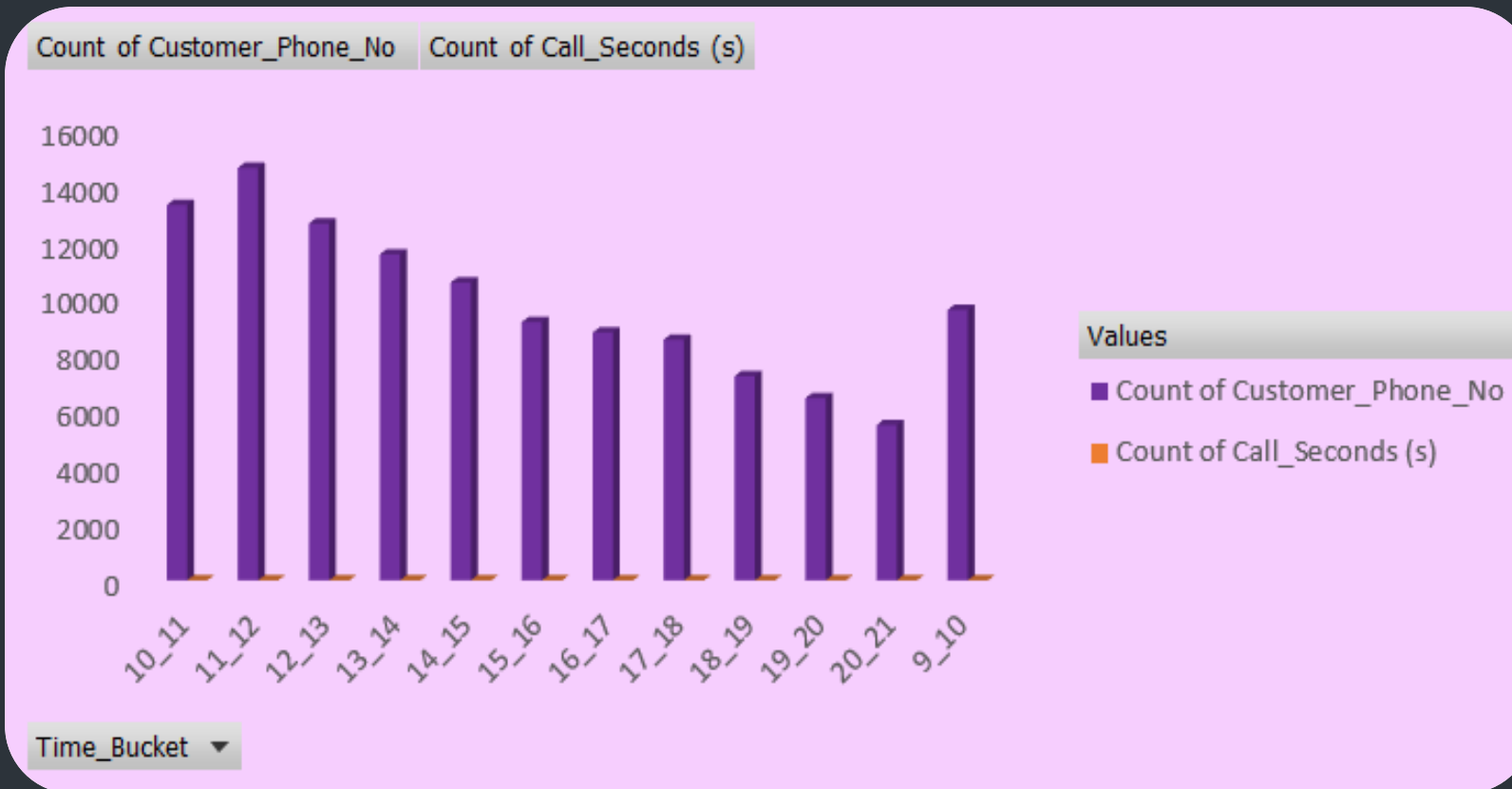
1) Average Call Duration

- ❑ **Task 1):** What is the average duration of calls for each time bucket?
- ✓ **Insight:** The highest average call duration is from 4pm to 9pm and least between 12am to 2pm.



2) Call Volume Analysis

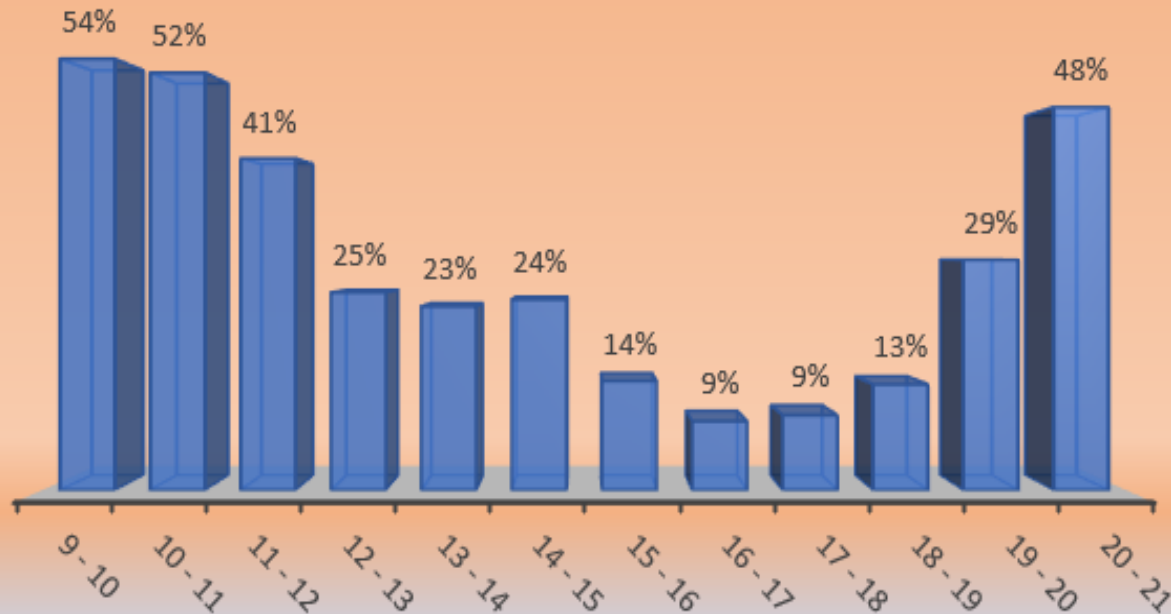
- ❑ **Task 2):** Can you create a chart or graph that shows the number of calls received in each time bucket?
- ✓ **Insight:** From the below chart we can observe that the highest call received from customer are in the 10am-2pm time bucket.



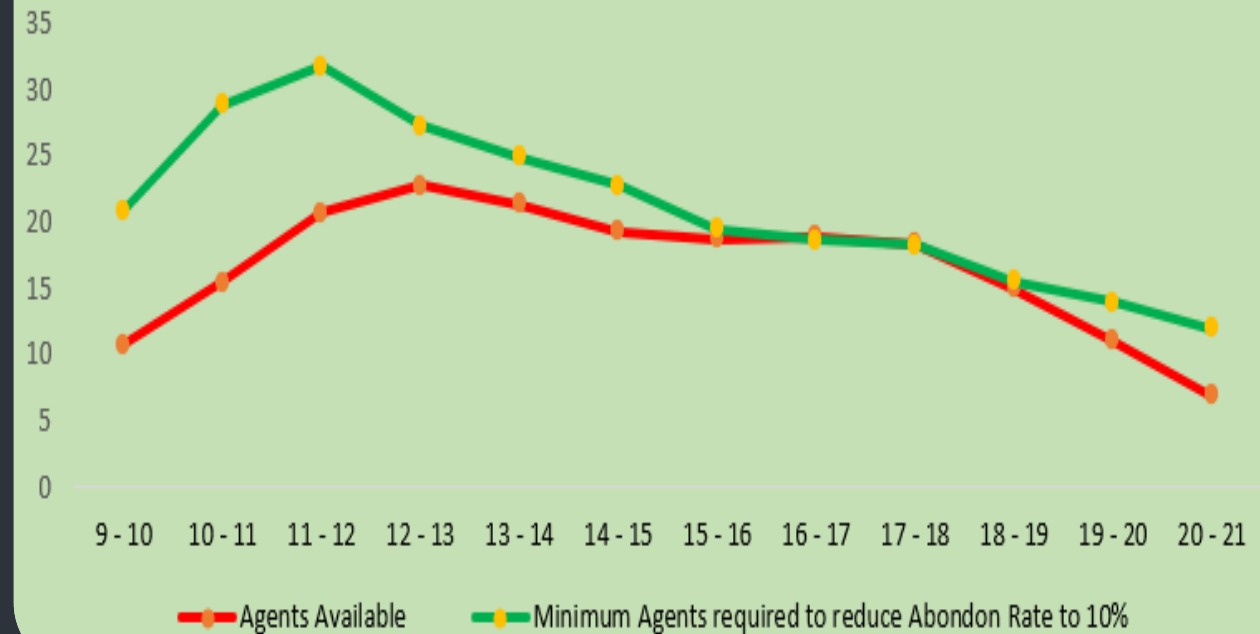
Task 3) Manpower Day Planning

- ❑ **Task:** What is the minimum number of agents required in each time bucket to reduce the abandon rate to 10%?
- ✓ **Insight:** The graph shows that the call abandonment rate by time bucket, and patterns shows that the abandon rate is highest at the beginning and end of the day shift.

Abandoned call %



Agents Available vs. Agents Required



Task 4) Night Shift Planning

- ❑ **Task:** Propose a manpower plan for each time bucket throughout the day, keeping the maximum abandon rate at 10%.
- ✓ **Insight:** For every 100 calls that customer make between 9am to 9pm ,they also make 30 calls at night between 9pm-9am. So, more number of agents are required to reduce Abandon rate to 10%



Insights

- The overall average call duration is 199 seconds. The highest call duration is observed during the 4 PM to 9 PM time slot, with an average of 203 seconds.
- The lowest call durations are noted between 12 AM to 2 PM, which indicates a lighter load or less complex issues during these hours.
- To reduce the abandon rate to 10% it's a good idea to adjust agent schedules by adding staff in the morning to afternoon shift (9am-2pm).. If needed, hiring additional agents to cover busy times could help. Using flexible work schedules could also ensure enough staff are available when demand is highest.
- Overall High demand periods are necessary for additional manpower. Proper shift adjustments and staff allocation can help reduce abandonment rates and improve overall efficiency.

Result

This project was challenging and has helped me to enhance my skills in Excel usage, comfortability around it, data analysis and visualization.

Skill learned: problem-solving and manpower planning.

Overall, this project enhanced my Excel skills for data analysis, equipping me with the ability to extract meaningful insights , make informed decisions and contribute to better outcomes.

[Excel sheet Hyperlink](#)



Thank you!

Project made by – Gitanjali Pekamwar