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ABC Call Volume Trend Analysis

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Report Outline

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Project Description

In the fiercely competitive landscape of the advertising industry, strategic insights and meticulous analysis are paramount for success. At the heart of this endeavor lies the Customer Experience (CX) team, a vital cog in the organizational machinery. With a mandate spanning from dissecting customer feedback to orchestrating seamless internal communications, the CX team serves as the lighthouse, guiding the company through the turbulent seas of consumer preferences.

In this project, we embark on a journey fueled by data, armed with the mission to decode the nuances of call volume trends within the CX domain. Across a span of 23 days, we delve into a comprehensive dataset encompassing agent details, queue times, call timestamps, durations, and statuses. Our objective? To unearth actionable insights that illuminate the path towards optimized customer engagement and cost-effective conversion strategies.

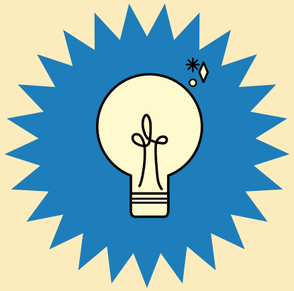
Amidst the cacophony of ringing phones and digital chatter, lies the treasure trove of information waiting to be unearthed. Through rigorous analysis and keen observation, we aim to decipher the patterns that underpin customer interactions. From discerning peak call hours to identifying bottlenecks in service delivery, every data point is a clue leading us closer to our goal - maximizing efficiency and enhancing the customer experience.

In a landscape where every second counts and every interaction shapes brand perception, the CX team stands as the vanguard of excellence. Through this project, we aim not just to analyze data, but to empower decision-makers with actionable intelligence that propels the company towards sustained growth and competitive advantage in the ever-evolving market terrain.

Approach

Analyze

Analyzed the Excel dataset from Trainity ABC Call Volume Trend Analysis project, comprehending the Call Features columns and their constraints.



Utilize

Utilized Microsoft Excel to address a series of predefined questions, employing functions, formulas, and data visualization methods for comprehensive analysis.

Extraction

Extracted actionable insights by dissecting the data, identifying trends, and correlations, aligning with project objectives and providing valuable inputs for strategic decision-making.

Tech Stack Used

MS Excel

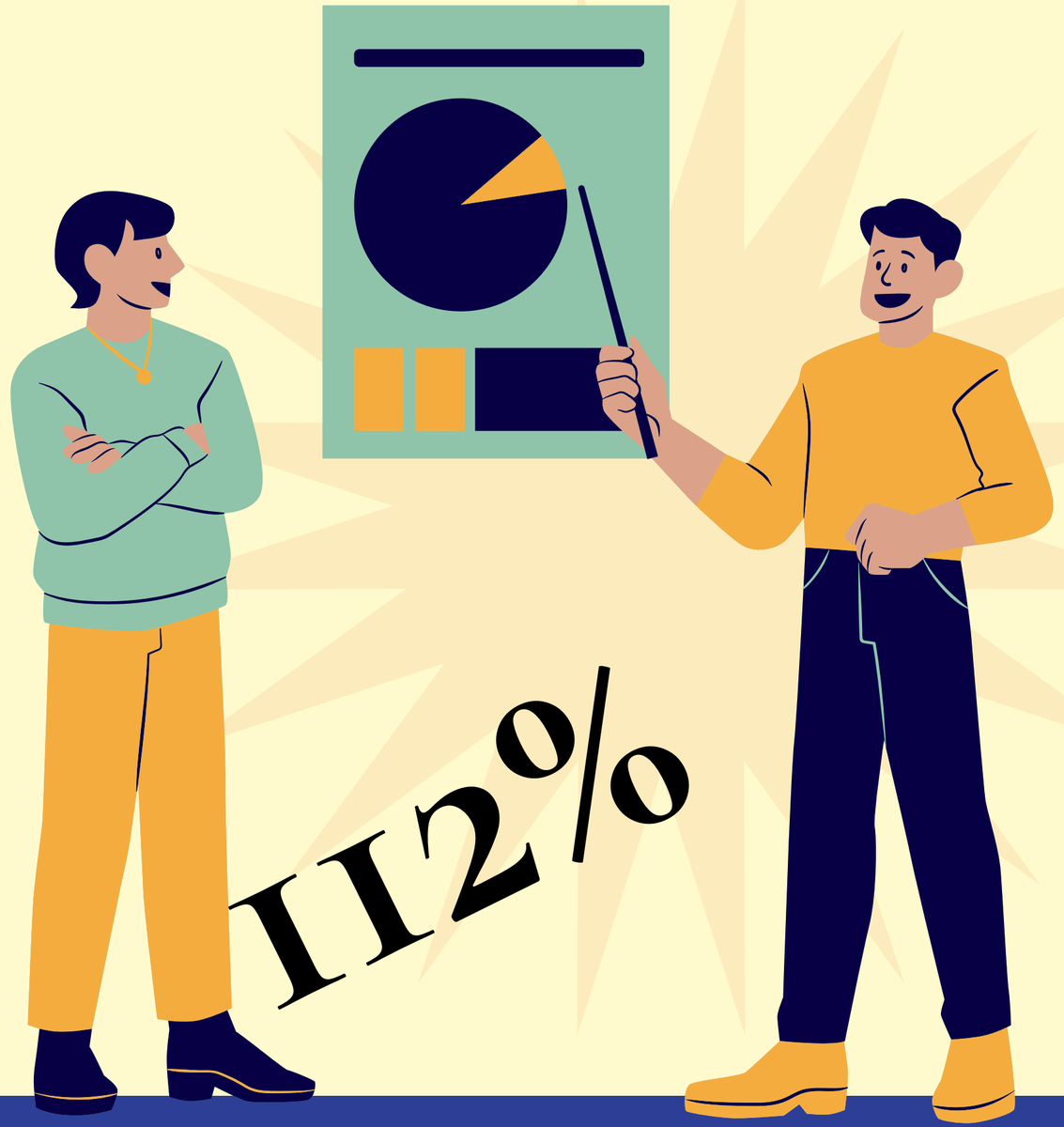
Microsoft Excel's user-friendly interface and powerful data manipulation tools make it ideal for efficient data cleaning. Its extensive range of functions simplifies error identification and correction, ensuring swift and accurate processing of large datasets.

Canva

Canva for PowerPoint offers a user-friendly interface with a plethora of creative tools, making it exceptionally easy to design visually stunning presentations

Notepad

Notepad offers a lightweight and efficient platform for quick note-taking and text editing tasks.
Its simplicity and minimalistic design ensure distraction-free writing, ideal for focusing on content.



Insights

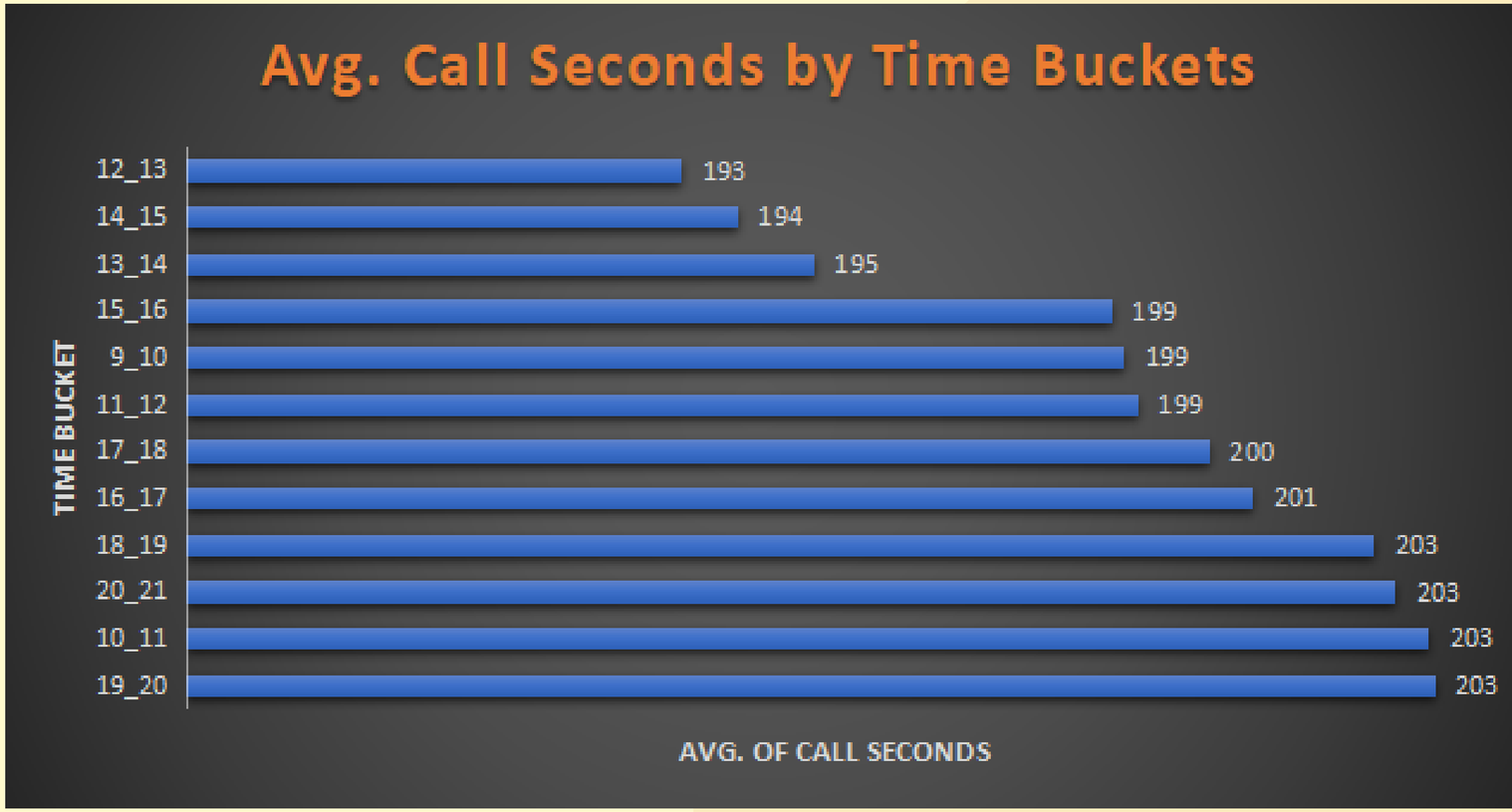
- Average Call Duration
    i. What is the average duration of calls for each time bucket?
- Call Volume Analysis
    i. Can you create a chart or graph that shows the number of calls received in each time bucket?
- Man Power Planning
    i. What is the minimum number of agents required in each time bucket to reduce the abandon rate to 10%?
- Night Shift Man Power Planning
    i. Propose a manpower plan for each time bucket throughout the day, keeping the maximum abandon rate at 10%.

I. Average Call Duration

What is the average duration of calls for each time bucket?

- Consider the columns Time Bucket, Call Status, and Call Seconds. Convert the columns into a pivot chart and use a bar chart to show the average of call seconds in each time bucket whose call status is answered.

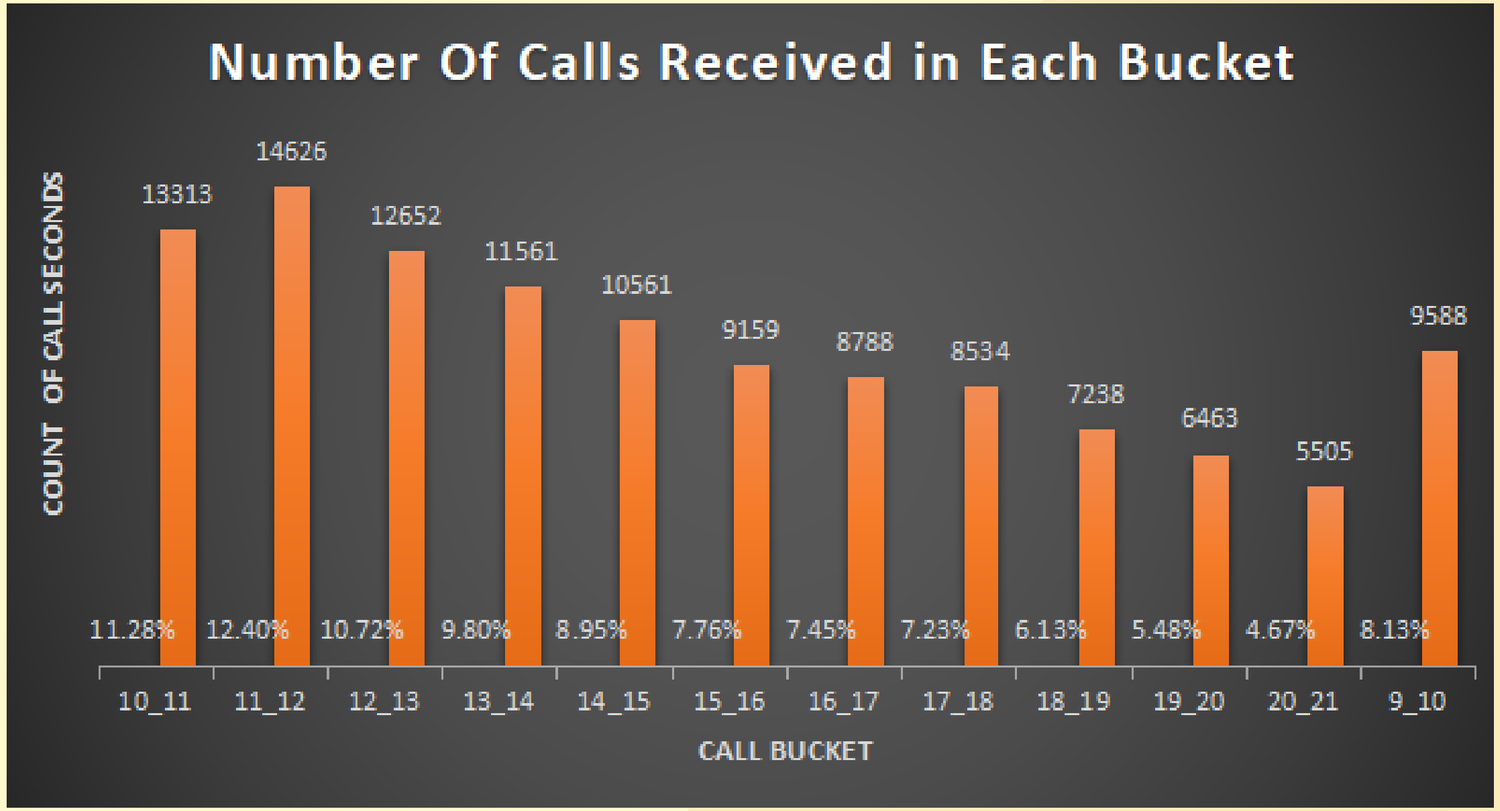
- From the shown chart, it is evident the time bucket from 18 – 21 has a greater number of customers who answer the call.



2. Call Volume Analysis

Can you create a chart or graph that shows the number of calls received in each time bucket?

- For this analysis, I've focused on comparing the Time Bucket and Call Seconds columns. To explore their relationship, I've utilized a Column chart, providing a visual representation of the data dynamics between these two variables. This approach aims to uncover patterns and trends within the dataset, facilitating a deeper understanding of the relationship between time intervals and call durations.



- Found the Column chart, it is clear that the time bucket 11am -12pm is having a greater number of calls with count 14626 when compared with other time buckets.

3. Man Power Planning

What is the minimum number of agents required in each time bucket to reduce the abandon rate to 10%?

- Utilizing the columns "Call Status," "Call Seconds," and "Customer Phone Number," I analyzed to determine the percentage of calls categorized as answered, abandoned, and transferred. The findings are as follows:
    - - Answered calls accounted for 70% of the total.
    - - Abandoned calls comprised 29%.
    - - Transferred calls constituted 1% of the total volume.
- In a separate analysis, focusing on the columns "Time Buckets" and "Call Seconds" specifically for January 1, I calculated the percentage of call seconds attributed to each time bucket. The results are as follows:
    - - 32% of call seconds were allocated to Time Bucket 1 i.e. from 09 AM to 12 PM.
    - - 30% of call seconds were allocated to Time Bucket 2 i.e. from 12 PM to 03 PM.
    - - 22% of call seconds were allocated to Time Bucket 3 i.e. from 03 PM to 06 PM.
    - - 16% of call seconds were allocated to Time Bucket 4 i.e. from 06 PM to 09 PM.
- These insights provide a valuable understanding of call distribution patterns and time utilization within the specified time frame.

3. Man Power Planning

What is the minimum number of agents required in each time bucket to reduce the abandon rate to 10%?

For January 1	
Sum of call seconds	**676664**
Sum per hour	187.96
Total agent for 60%	38
Agents required for 90%	57

- As per the above table, we can add a total of 57 agents to reduce the abandon rate from 30% to 10%.

Row Labels	Count of Call_Seconds (s)	Agents Required
10_11	11%	6
11_12	12%	7
12_13	11%	6
13_14	10%	6
14_15	9%	5
15_16	8%	4
16_17	7%	4
17_18	7%	4
18_19	6%	3
19_20	5%	3
20_21	5%	3
9_10	8%	5
Grand Total	**100%**	
Date_&_Time	(Multiple Items)	

4. Night Shift Man Power Planning

Propose a manpower plan for each time bucket throughout the day, keeping the maximum abandon rate at 10%.

- By utilizing the columns "Call Status" and "Date & Time," I conducted an analysis that involved converting the data into a Pivot Table format. From this Pivot Table, I derived the total count of calls categorized as abandoned, answered, and transferred. The results of this analysis are as follows:
    - - Answered calls: 82,452
    - - Abandoned calls: 34,403
    - - Transferred calls: 1,133
- These findings provide valuable insights into the distribution of call statuses within the dataset, facilitating a better understanding of call handling dynamics.

Avg. Daily Call	5130
Night Calls 30%	1539
Additional Hours Required	77
Additional Agents Required	15

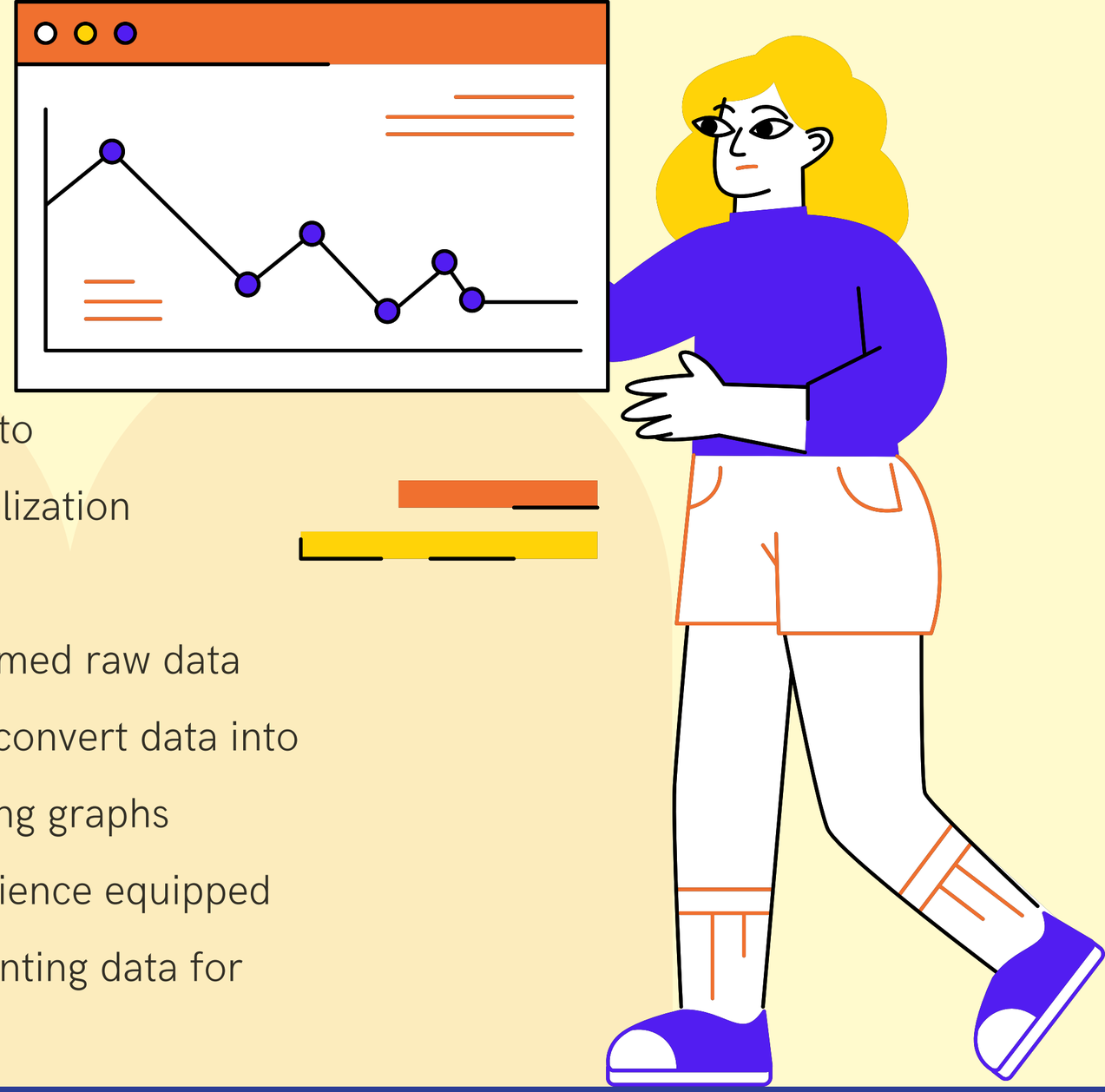
Night Time Bucket	Call Distributio	Time Distributio	Agent Require
9pm - 10pm	3	10	1.5
10pm - 11pm	3	10	1.5
11pm - 12am	2	15	1
12am - 1am	2	15	1
1am - 2am	1	30	0.5
2am - 3am	1	30	0.5
3am - 4am	1	30	0.5
4am - 5am	1	30	0.5
5am - 6am	3	10	1.5
6am - 7am	4	7.5	2
7am - 8am	4	7.5	2
8am - 9am	5	6	2.5
Total	30		15

- This is the split of the 30 Agents who can be added to the time bucket so that there can be agents who can answer the query in the nighttime as well.

Results

This project provided me with a comprehensive understanding of utilizing Pivot Tables in Excel for data analysis. I gained proficiency in leveraging Pivot Tables to uncover correlations and create various charts for visualization purposes.

By cleansing the data and applying formulas, I transformed raw data into meaningful insights. Additionally, I learned how to convert data into visualized charts, facilitating quick insights by interpreting graphs instead of sifting through extensive datasets. This experience equipped me with valuable skills in efficiently analyzing and presenting data for informed decision-making.



As a result, we could summarize as:

Average Call Duration

The time bucket from 18pm - 21pm have a greater number of customers who answer the call.

Call Volume Analysis

The time bucket 11 am -12 pm has a greater number of calls with a count of 14626 when compared with other time buckets.

Man Power Planning

A total of 57 agents to reduce the abandon rate from 30% to 10%.

Night Shift Man Power Planning

30 Agents who can be added in the time bucket so that there can be agents who can answer to the query in the night time as well.

Thank You