ABC CALL VOLUME TRENDS

Done by: B.Havilah

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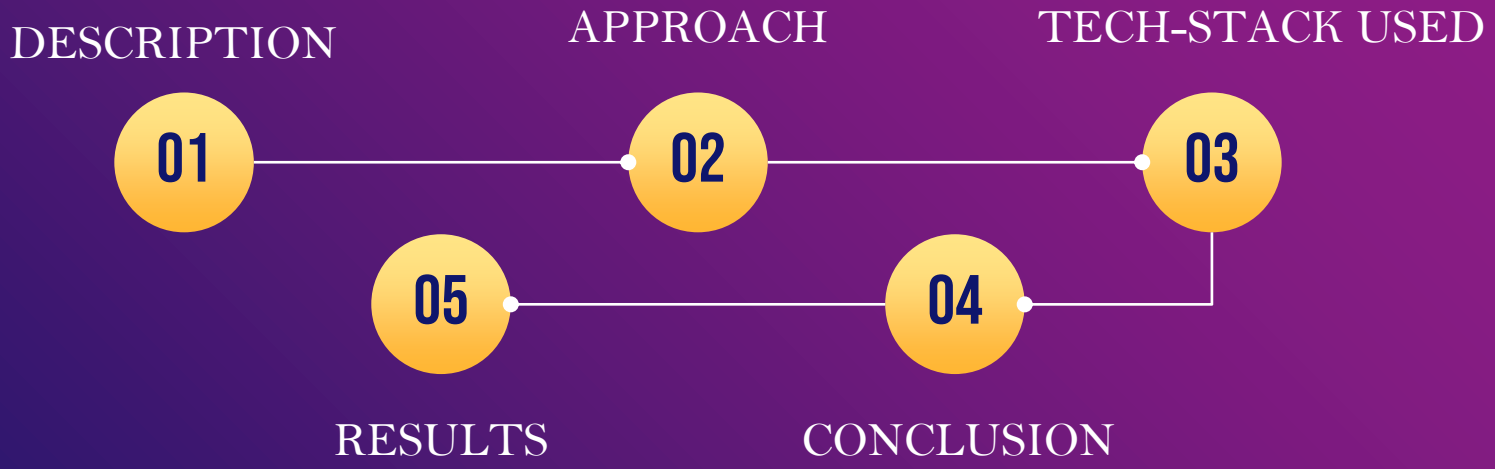


ABOUT THE PROJECT

- The "ABC Call Volume Trend Analysis" project focuses on leveraging Customer Experience (CX) analytics to delve into the trends and patterns within the inbound call volume of Company ABC's customer support team. By examining a comprehensive dataset spanning 23 days, encompassing various call details such as queue time, call duration, and call status.
- The objective is to extract valuable insights regarding call volume fluctuations and their potential correlation with advertising activities.

APPROACH

TASK - 1

- 1. Pivot Table Usage: Used a pivot table to organize data by time buckets, simplifying the process of finding the average call duration per period.
- 2. Average Call Duration Calculation: Employed the pivot table feature to calculate the mean call duration within each time bucket, revealing fluctuations in call duration over the day.
- 3. Visual Presentation: Translated the calculated average call durations into a clear, easy-to-understand bar chart format, aiding stakeholders in interpreting call duration trends across various time periods.

TASK - 2

- 1. Pivot Table Used: Employed a pivot table to group and summarize data by time buckets, allowing for total call count calculation per period.
- 2. Call Volume Calculated: Utilized customer phone numbers to tally total calls received, offering insights into call volume distribution across various time buckets.
- 3. Bar Chart Created: Transformed total call counts for each time bucket into a clear bar chart, aiding stakeholders in grasping daily call volume trends and identifying peak call times efficiently.

TASK - *3*

- A manpower plan required to reduce the abandon rate to 10%.
- The effective working days of an employee = 20 X 7/28 = 5
- and The effective working hours (60% occupation time of agent) = 7.5 X 0.6 = 4.5hours.
- total working hours = 9
- on floor working hour = 7.5
- days worked in 1 week = 5
- total time spent = 4.5

TASK - 3

- Time taken an average to answer the call(Queue) : 36.032
- Count of abandon calls : 34403
- Average of abandon calls : 0.291578
- Formula used for the above =COUNTIF(C:C, “abandon") / COUNTA(C:C)
- Total Average calls = Total calls/no. of time periods => 117988/12 =9832.33
- Abandonment Rate: Total average abandoned/Total average calls *100 = 0.296327%

TASK - 3

- Count of answered calls : 82452
- Average of abandon calls : 0.698810906
- Formula used for the above =COUNTIF(C:C, “answered") / COUNTA(C:C)
- Total Average calls = Total calls/no. of time periods => 117988/12 =9832.33
- Answered Rate: Total average answered/Total average calls *100 = 0.007198%

- Count of Transferred calls :1133
- Average of Transferred calls: 0.00960259
- Transferred Rate : Total average Transferred/Total average calls *100 = 0.009766%

TASK - 4

- Average time taken for a call = Total calls duration / No.of Calls Received = 16463119/117988 = 139.53
- Total number of days in dataset = 23
- Average calls per day = No.of Calls Received / No.of days given = 117988/23 = 5129.91

- Total extra hours required:
  - Total calls during the night shift: 30
  - Total night hours: 12 (9 pm to 9 am)
  - Additional workload per hour: 3012=2.51230=2.5 calls per hour
  - Total extra hours required: 2.5×12.5×1 hour = 2.5 hours

TASK - 4

2. Total working hours for one agent per month:
    - Total working hours per day: 9 hours
    - Lunch and snacks time: 1.5 hours
    - Total working hours per day for calls: $9-1.5=7.59-1.5=7.5$ hours
    - Total working hours per month (assuming 6 days a week and 30 days a month): $7.5\times6\times30=13507.5\times6\times30=1350$ hours
3. Total extra hours required per month: $2.5\times30=752.5\times30=75$ hours
4. Number of agents needed: $75/7.5=10$

- The total agents required to attend 90% of all the incoming calls in a day is: 914.6 + 10 = 924.6

TASK - 4

For calculating agents required in each bucket :

Total working hours per month: $7.5 \times 6 \times 4 = 180$ $7.5 \times 6 \times 4 = 180$ hours (considering 4 weeks in a month)

- Actual working hours spent on calls by an agent per month:
- 60% of total actual working hours: $0.60 \times 180 = 108$ $0.60 \times 180 = 108$ hours
- Total number of extra hours required per month for all agents: 2.94 hours

TECH-STACK USED

MICROSOFT EXCEL

- Pivot tables
- Charts
- Functions
- Formulas
- Filters

INSIGHTS

- 1. CX Analytics Focus:
  - The project delves into CX analytics, emphasizing inbound call analysis for customer support enhancement.

- 2. Importance of CX Team:
  - Recognizes the pivotal role of CX teams in analyzing customer data to improve overall customer experience.

- 3. Role of Call Center Agents:
  - Highlights the significance of call center agents in providing various support services, particularly inbound customer support.

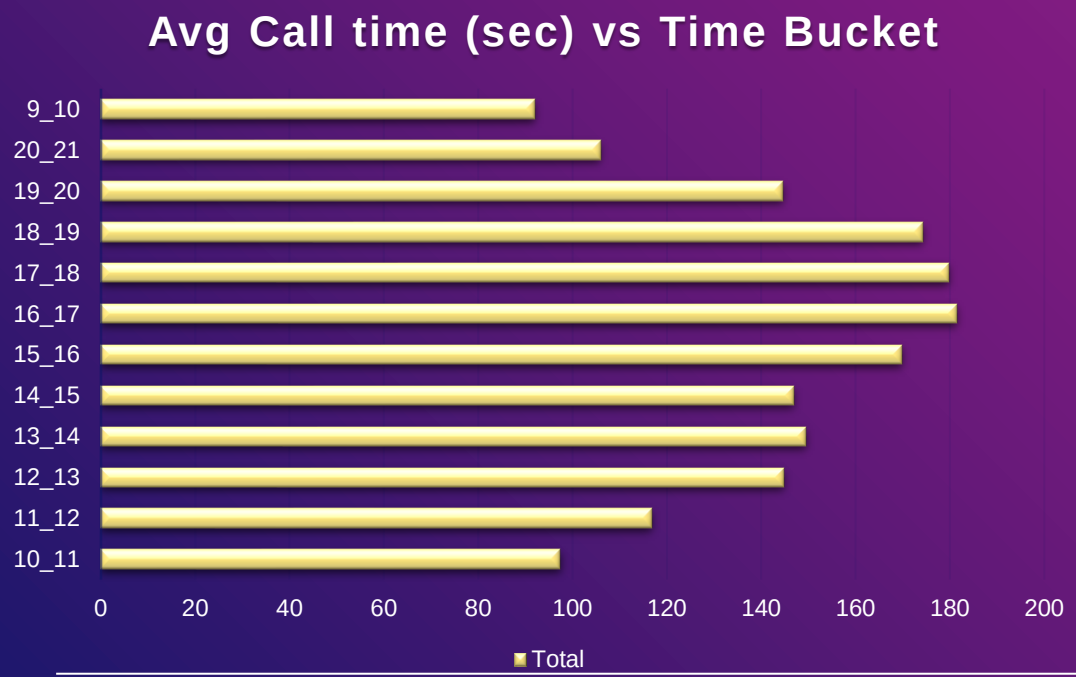
- 4. Objective of Inbound Support:
  - Identifies the primary goal of inbound customer support: attracting, engaging, and delighting customers to foster loyalty.

- 5. Analytical Approach:
  - Emphasizes leveraging analytical skills to understand call volume trends and extract actionable insights for improving CX.

- 6. Advertising Insights:
  - Acknowledges the competitive nature of advertising and the role of analytics in optimizing advertising strategies for effective customer conversion.

RESULTS

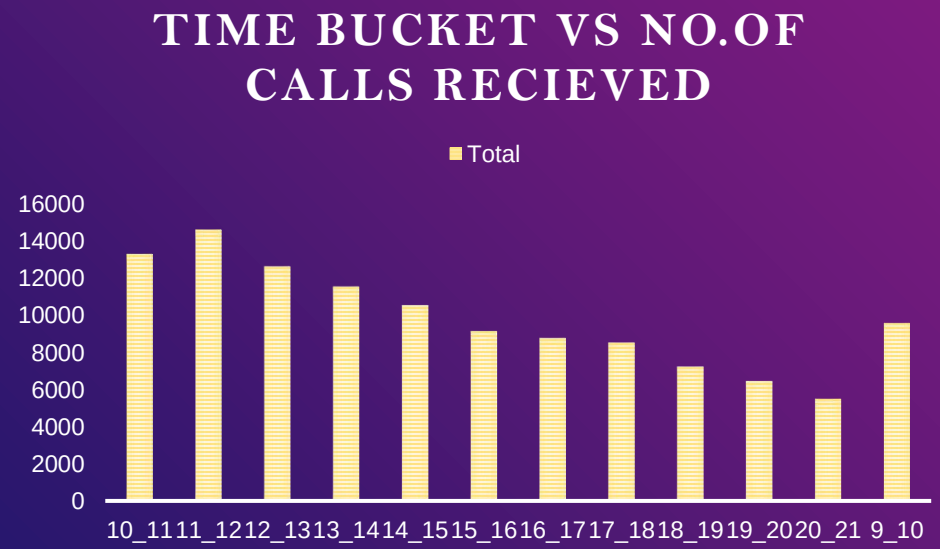
TASK - 1



Time Bucket	Average of Call_Seconds (s)
10_11	97.42402163
11_12	116.7837413
12_13	144.7250237
13_14	149.5409567
14_15	146.9693211
15_16	169.8968228
16_17	181.4393491
17_18	179.7245137
18_19	174.3246753
19_20	144.5825468
20_21	105.9491371
9_10	92.01032541
Grand Total	**139.5321473**

RESULTS

TASK - 2



Time Bucket	No.of Calls Recieved
10_11	13313
11_12	14626
12_13	12652
13_14	11561
14_15	10561
15_16	9159
16_17	8788
17_18	8534
18_19	7238
19_20	6463
20_21	5505
9_10	9588
Grand Total	**117988**

RESULTS

TASK - 3

The Proposed Manpower plan

Time Bucket	No.of Calls Recieved	Calls to be answered (90%)	Sum of Call_Seconds (s)	Average Handling Time	Total time in hours	No.of Agents
10_11	13313	11981.7	1297006	97.42402163	360.2794444	72.05588889
11_12	14626	13163.4	1708079	116.7837413	474.4663889	94.89327778
12_13	12652	11386.8	1831061	144.7250237	508.6280556	101.7256111
13_14	11561	10404.9	1728843	149.5409567	480.2341667	96.04683333
14_15	10561	9504.9	1552143	146.9693211	431.1508333	86.23016667
15_16	9159	8243.1	1556085	169.8968228	432.2458333	86.44916667
16_17	8788	7909.2	1594489	181.4393491	442.9136111	88.58272222
17_18	8534	7680.6	1533769	179.7245137	426.0469444	85.20938889
18_19	7238	6514.2	1261762	174.3246753	350.4894444	70.09788889
19_20	6463	5816.7	934437	144.5825468	259.5658333	51.91316667
20_21	5505	4954.5	583250	105.9491371	162.0138889	32.40277778
9_10	9588	8629.2	882195	92.01032541	245.0541667	49.01083333

RESULTS

TASK - 4

Total calls between 9am to 9pm	117988
Average calls per day	5129.91
Supposed no.of calls per day (average calls per day * 0.3)	4616.92
Average time taken to answer 1 call	139.50
Total time increased (supoosed no.of calls * average call time for 1 call)	644060.34
Time to answer 90% of the calls (call time increase * 0.9)	579654.31
Time to answer 90% of th calls in hours = (call time increase*0.9)/3600	161.01

Total agents = 924.6 so, actual agents required = 924.6/number of agents required

TASK - 4

The Proposed Manpower plan

Time Bucket	No.of Calls Recieved	Average of Call_Seconds (s)	Avg number of Calls recieved	Call time	90% call attending time	Total call time in hours	Number of Agents required	Actual agents required
10_11	13313	97.42402163	578.826087	56391.56522	50752.4087	14.0978913	281.9578261	3.27921382
11_12	14626	116.7837413	635.9130435	74264.30435	66837.87391	18.56607609	371.3215217	2.490025344
12_13	12652	144.7250237	550.0869565	79611.34783	71650.21304	19.90283696	398.0567391	2.32278444
13_14	11561	149.5409567	502.6521739	75167.08696	67650.37826	18.79177174	375.8354348	2.460119282
14_15	10561	146.9693211	459.173913	67484.47826	60736.03043	16.87111957	337.4223913	2.740185666
15_16	9159	169.8968228	398.2173913	67655.86957	60890.28261	16.91396739	338.2793478	2.733244007
16_17	8788	181.4393491	382.0869565	69325.6087	62393.04783	17.33140217	346.6280435	2.667412569
17_18	8534	179.7245137	371.0434783	66685.6087	60017.04783	16.67140217	333.4280435	2.773012103
18_19	7238	174.3246753	314.6956522	54859.21739	49373.29565	13.71480435	274.296087	3.370810026
19_20	6463	144.5825468	281	40627.69565	36564.92609	10.15692391	203.1384783	4.551574906
20_21	5505	105.9491371	239.3478261	25358.69565	22822.82609	6.339673913	126.7934783	7.292173168
9_10	9588	92.01032541	416.8695652	38356.30435	34520.67391	9.589076087	191.7815217	4.821110979
Grand Total	117988	139.5321473	5129.913043	715787.7826	644209.0043	178.9469457	3578.938913	41.5017

CONCLUSION

- Drive link : google_drive
- My Excel worksheet: my_excel
- My loom video link: My_presentation