Project - ABC Call Volume Trend Analysis

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Link to the excel file -
https://docs.google.com/spreadsheets/d/1a5NWXsRSv5ftwOTgOz1cay_FVPlFuTuk/edit?usp=sharing&ouid=116598383154898349386&rtpof=true&sd=true

Project Description

This whole project is based on Customer Experience (CX) analytics, specifically focusing on the inbound calling team of a company, which is the focus of this project, Dataset contains information about the inbound calls received by a company named ABC, which operates in the insurance sector. Main objective is to drive useful insights using a dataset that spans 23 days and includes various details such as the agent's name and ID, the queue time, the time of the call, the duration of the call, and the call status.

Approach

Began exploring whole dataset, analyzed and understood each and every variable, used functions like pivot table to drive conclusion between variables, graphs or chart to visually show insights and also used mathematical function like mean/average to find number of calls each day and average duration of call to determine manpower required.

Tech – stack used

Tech stack used to complete this project is Microsoft Excel 365 provided with its wide range capabilities and functionality made tasks much easier to perform that is to derive important and critical insight to address the question of client also with wide range of options in visualization panel, visual presentation of insights for the client were accomplished easily.

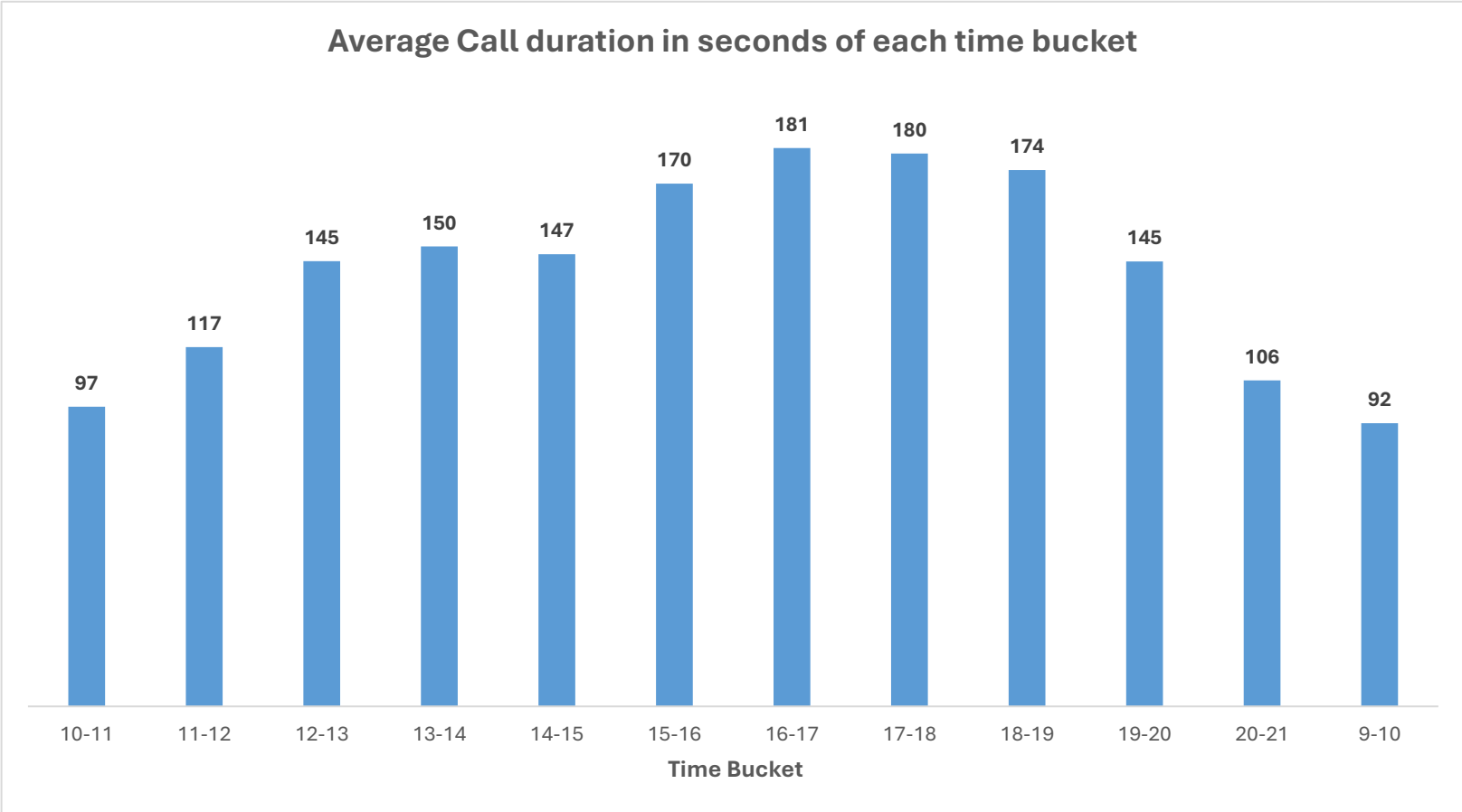
Insights

After completing this project, there were important and critical insights such as time bucket of 16-17 has highest average time call duration among all other time bucket, time bucket of 9-10 as the lowest average call duration among all other time bucket, the greatest number of calls received between 11-12, least number of calls received between 20-21, total Manpower required for reduce abended rate to 10% is 56, total manpower required for the night shift will be 17.

Result

While working on this project, I learned about Customer Experience (CX) analytics like what type of variable there can be in a dataset what significance it holds towards analysis and greatly enhanced my problem-solving skills and all these learnings definitely enhanced my data analytics skills.

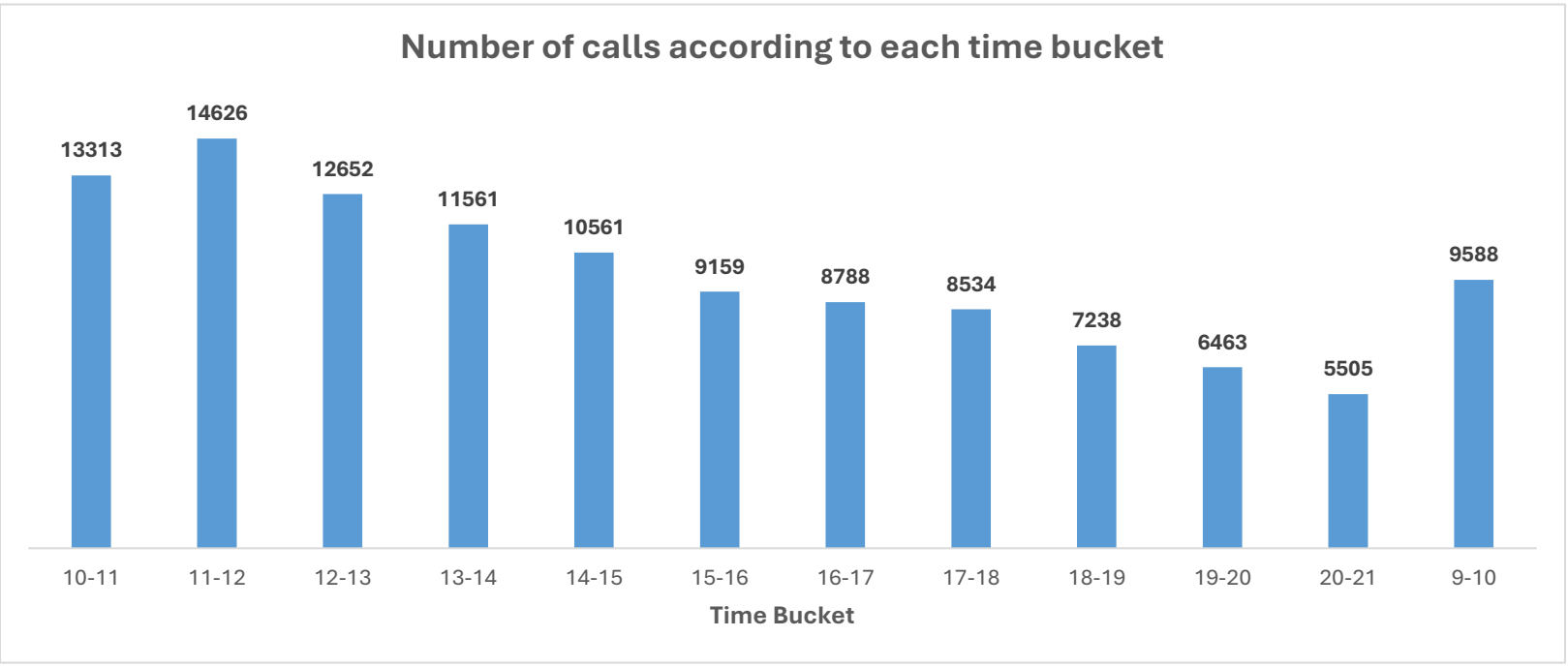
Task 1 - What is the average duration of calls for each time bucket?



- **Time bucket of 16-17 has highest average time call duration among all other time bucket.**
- **Time bucket of 9-10 as the lowest average call duration among all other time bucket.**

Task 2 - Create a chart or graph that shows the number of calls received in each time bucket?

Time Bucket	Count of Calls
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**



- **Most number of calls received between 11-12.**
- **Least number of calls received between 20-21.**

Task 3 - What is the minimum number of agents required in each time bucket to reduce the abandon rate to 10%?

- Details number of calls of different call status.

Date	abandon	answered	transfer	Grand Total
1-Jan	684	3883	77	4644
2-Jan	356	2935	60	3351
3-Jan	599	4079	111	4789
4-Jan	595	4404	114	5113
5-Jan	536	4140	114	4790
6-Jan	991	3875	85	4951
7-Jan	1319	3587	42	4948
8-Jan	1103	3519	50	4672
9-Jan	962	2628	62	3652
10-Jan	1212	3699	72	4983
11-Jan	856	3695	86	4637
12-Jan	1299	3297	47	4643
13-Jan	738	3326	59	4123
14-Jan	291	2832	32	3155
15-Jan	304	2730	24	3058
16-Jan	1191	3910	41	5142
17-Jan	16636	5706	5	22347
18-Jan	1738	4024	12	5774
19-Jan	974	3717	12	4703
20-Jan	833	3485	4	4322
21-Jan	566	3104	5	3675
22-Jan	239	3045	7	3291
23-Jan	381	2832	12	3225
Grand Total	34403	82452	1133	117988

Time Bucket	% of total number of calls	Allocation
10-11	11.28%	6
11-12	12.40%	7
12-13	10.72%	6
13-14	9.80%	5
14-15	8.95%	5
15-16	7.76%	4
16-17	7.45%	4
17-18	7.23%	4
18-19	6.13%	3
19-20	5.48%	3
20-21	4.67%	3
9-10	8.13%	5
	100.00%	56

- Total Manpower required is 56.
- Most number of employees are required in time bucket 11-12 i.e. 7

Task 4 - Propose a manpower plan for each time bucket throughout the day, keeping the maximum abandon rate at 10%.

- **Details about count of calls of different call status and allocation of manpower required for the night shift.**

Date	abandon	answered	transfer	Grand Total
1-Jan	684	3883	77	4644
2-Jan	356	2935	60	3351
3-Jan	599	4079	111	4789
4-Jan	595	4404	114	5113
5-Jan	536	4140	114	4790
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Grand Total	34403	82452	1133	117988

Time Slot	Number of Calls	%	Allocation
9pm - 10pm	3	10%	2
10pm - 11pm	3	10%	2
11pm - 12am	2	7%	1
12am - 1am	2	7%	1
1am - 2am	1	3%	1
2am - 3am	1	3%	1
3am - 4am	1	3%	1
4am - 5am	1	3%	1
5am - 6am	3	10%	2
6am - 7am	4	13%	2
7am - 8am	4	13%	2
8am - 9am	5	17%	3
	30	100%	17

- **Total manpower required for the night shift will be 17.**
- **Most number employee required in time bucket of 8am to 9am.**