ABC Call Volume Trend Analysis

Final Project – 3

Difficulty Level - \*\*\*\*\*

Description: For you final project we are providing you with a dataset of a Customer Experience (CX) Inbound calling team for 23 days. Data includes Agent\_Name, Agent\_ID, Queue\_Time [duration for which customer have to wait before they get connected to an agent], Time [time at which call was made by customer in a day], Time\_Bucket [for easiness we have also provided you with the time bucket], Duration [duration for which a customer and executives are on call, Call\_Seconds [for simplicity we have also converted those time into seconds], call status (Abandon, answered, transferred).

A customer experience (CX) team consists of professionals who analyze customer feedback and data, and share insights with the rest of the organization. Typically, these teams fulfil various roles and responsibilities such as: Customer experience programs (CX programs), Digital customer experience, Design and processes, Internal communications, Voice of the customer (VoC), User experiences, Customer experience management, Journey mapping, Nurturing customer interactions, Customer success, Customer support, Handling customer data, Learning about the customer journey

Let’s look at some of the most impactful AI-empowered customer experience tools you can use today:

Interactive Voice Response (IVR), Robotic Process Automation (RPA), Predictive Analytics, Intelligent Routing

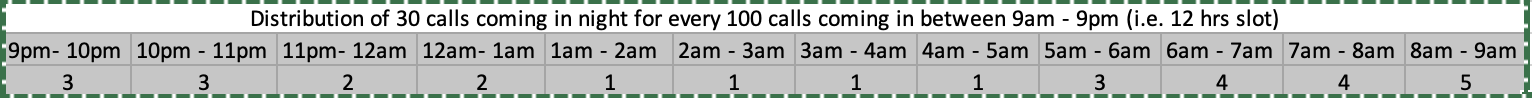
In a Customer Experience team there is a huge employment opportunities for Customer service representatives A.k.a. call centre agents, customer service agents. Some of the roles for them include: Email support, Inbound support, Outbound support, social media support.

Inbound customer support is defined as the call centre which is responsible for handling inbound calls of customers. Inbound calls are the incoming voice calls of the existing customers or prospective customers for your business which are attended by customer care representatives. Inbound customer service is the methodology of attracting, engaging, and delighting your customers to turn them into your business' loyal advocates. By solving your customers' problems and helping them achieve success using your product or service, you can delight your customers and turn them into a growth engine for your business.

Case Study Objectives:

**Attached is the dataset of Inbound calls of a ABC company from the insurance category. Use this data to answer the following:**

1. Calculate the average call time duration for all incoming calls received by agents (in each Time\_Bucket).
2. Show the total volume/ number of calls coming in via charts/ graphs [Number of calls v/s Time]. You can select time in a bucket form (i.e. 1-2, 2-3, …..)
3. As you can see current abandon rate is approximately 30%. Propose a manpower plan required during each time bucket [between 9am to 9pm] to reduce the abandon rate to 10%. (i.e. You have to calculate minimum number of agents required in each time bucket so that at least 90 calls should be answered out of 100.)
4. Let’s say customers also call this ABC insurance company in night but didn’t get answer as there are no agents to answer, this creates a bad customer experience for this Insurance company. Suppose every 100 calls that customer made during 9 Am to 9 Pm, customer also made 30 calls in night between interval [9 Pm to 9 Am] and distribution of those 30 calls are as follows:



Now propose a manpower plan required during each time bucket in a day. Maximum Abandon rate assumption would be same 10%.

Assumption: An agent work for 6 days a week; On an average total unplanned leaves per agent is 4 days a month; An agent total working hrs is 9 Hrs out of which 1.5 Hrs goes into lunch and snacks in the office. On average an agent occupied for 60% of his total actual working Hrs (i.e 60% of 7.5 Hrs) on call with customers/ users. Total days in a month is 30 days.

**How to do this Project?**

1. **Download the dataset:** You are supposed to download the dataset and perform the analysis using Excel or Excel with  Pivot Table.
2. **Perform Analysis:** Use Excel  to perform your entire analysis answering the questions asked above.
3. **Submit a Report:** Make a report (PDF/PPT; not more than 10 Pages) to be presented to the leadership team. The report should/can contain the following details:

Project Description: Give a brief about your project description i.e. what is this project about, how are you going to handle the things and what are the things that you are going to find out through the project.

Approach: Write a short paragraph about your approach towards the project and how you have executed it.

1. Tech-Stack Used
2. Do mention the software and the version used while making the project (For Eg. Jupyter Notebook, etc) and mention the purpose of using it.
3. Insights
4. Jot down the insights and the knowledge you gained while making the project. You need to write what you infer about the things. Make sure it's brief and up to the point only. For Eg. If you got a graph then what do you understand by the graph, what changes can you make or what can you derive from the graph.
5. Result
6. Mention what have you achieved while making the project and how do you think it has helped you.
7. Drive Link
8. Save your file as a “.pdf” file and upload it to your Google Drive. Mention the shareable link **(link visibility should be set to public)** in your pdf file which you will be uploading. Do not directly upload your project.

**Judgment Criteria:**

Data Analytics

Your answers must contain relevant points related to the data analysis and should have real world case scenarios.

Advanced Excel Understanding

Your spreadsheet must have clear explanations of the processes used, eg, pivot tables, functions used, formulas explained, etc.

Statistics Understanding

Your answers must contain graphs and stats references.

Case study completion

All the questions present must be answered completely with correct answers.

Insights

You need to use your own imagination to answer the case study while improvising it as well.

Plagiarism

Project submitted should not be copied from the internet or anywhere else, it should be your own work.