**Navigating Call Volume Trends: Uncovering Patterns & Progression**

**Description:**

This project delves into the world of Customer Experience (CX) analytics, specifically focusing on the inbound calling team of a company. The dataset that spans for 23 days and includes various details such as the agent's name and ID, the queue time (how long a customer had to wait before connecting with an agent), the time of the call, the duration of the call, and the call status (whether it was abandoned, answered, or transferred). The requirement is to simply use perform Customer Experience (CX) analytics, specifically focusing on the inbound calling team of a company analyse patterns in the data, accomplish below mentioned objectives and attract, engage, and delight customers, turning them into loyal advocates for the business.

**Business Objectives:**

* **Average Call Duration:** Determine the average duration of all incoming calls received by agents. This should be calculated for each time bucket.
* **Call Volume Analysis:** Visualize the total number of calls received. This should be represented as a graph or chart showing the number of calls against time. Time should be represented in buckets (e.g., 1-2, 2-3, etc.).
  + Task:  Create a chart or graph that shows the number of calls received in each time bucket.
* **Manpower Planning:** The current rate of abandoned calls is approximately 30%. Propose a plan for manpower allocation during each time bucket (from 9 am to 9 pm) to reduce the abandon rate to 10%. In other words, you need to calculate the minimum number of agents required in each time bucket to ensure that at least 90 out of 100 calls are answered.
  + Task: What is the minimum number of agents required in each time bucket to reduce the abandon rate to 10%?
* **Night Shift Manpower Planning:** Customers also call ABC Insurance Company at night but don't get an answer because there are no agents available. This creates a poor customer experience. Assume that for every 100 calls that customers make between 9 am and 9 pm, they also make 30 calls at night between 9 pm and 9 am. The distribution of these 30 calls is as follows:
  + Task: Propose a manpower plan for each time bucket throughout the day, keeping the maximum abandon rate at 10%.

**Assumptions available for adoption**: An agent works for 6 days a week; On average, each agent takes 4 unplanned leaves per month; An agent's total working hours are 9 hours, out of which 1.5 hours are spent on lunch and snacks in the office. On average, an agent spends 60% of their total actual working hours (i.e., 60% of 7.5 hours) on calls with customers/users. The total number of days in a month is 30.

