ASSIGNMENT

Introduction:

You are hired as a Data Analyst by Organization A, a company specializing in automated voice calling services. The primary function of the organization is to reach out to users for payment reminders, counseling in case of payment difficulties, and providing information about the impact on credit scores.

Your role as a Data Analyst involves analyzing the massive volume of data generated from these automated calls. Calls happen in natural language and is not an IVR call with number inputs.

Here we have an AI agent which talks to customer in their preferred language and customer replies back in their natural language. All the calls follow guidelines set by client.

Task:

Your task is to generate a comprehensive report that provides valuable insights and actionable recommendations. The report will be shared with the clients of Organization A.

The report should cover various metrics and visualizations related to the automated voice calling system.

Key Metrics and Visualizations:

1. Language Level Collection:
   - Analyze the collection rates based on different languages used in the automated calls.
   - Provide visualizations depicting language-wise collection performance.

2. Demographic Analysis:
   - Explore the demographic information of the called users.
   - Create visualizations to represent the distribution of calls across different demographics.

3. [Candidate's Choice 1]:
   - Choose and analyze a specific metric related to the automated voice calling system that you find relevant.
   - Provide visualizations and insights to support your analysis.

4. [Candidate's Choice 2]:
   - Identify and analyze a unique aspect of the data that you believe could offer valuable insights.
   - Create visualizations to present your findings and support your recommendations.

5. Recommendations for Improvements:
   - Propose actionable recommendations based on your analysis.
   - Suggest improvements in the automated calling system to enhance collection rates.

Additional Metrics (Candidate's Initiative):
   - Dig deeper into the data to identify additional relevant metrics.
   - Explore patterns that might not be immediately apparent in the provided context.
   - Propose at least two additional metrics with explanations for their relevance.

Deliverables:
1. A detailed report with insights and visualizations for each metric.
2. Actionable recommendations for improving the automated voice calling system.
3. Any additional metrics proposed with explanations.

Submission Guidelines:
- Use appropriate tools for data analysis and visualization.
- Clearly document your methodology and any assumptions made.
- Present the report in a format suitable for sharing with clients.

Dataset details - analyst_interview_dataset.csv
client_name: Name of Client
dialed_time: DD/MM/YYYY hh:mm:ss
flow_type: kind of delinquency buckets (predue / postbounce etc)
~~langauge~~language: call language
disposition: summary/final outcome of the conversation
ptp_date: Promise to Pay date when a borrower has promised to pay on a fixed date.
reason: delay reason for payment
talk_time: Talk time of call.
ring_time: Ring time of call
loan_id: Loan ID/ Unique Identification Code for borrower
emiAmount: EMI Amount
emiDate: EMI Due Date
gender: Gender of Borrower
channel: Message/Call

Note:
Feel free to reach out if you need any clarification on the data or the task. Your analysis and recommendations should not only address the provided metrics but also demonstrate your ability to think critically and extract meaningful insights from the data.