Business Intelligence Challenge

Part 1: Technical Skills

Q1: This challenge is an opportunity for you to show us a little bit of the great talent that we know you have. To solve this challenge, we share to you three csv files (use them wisely):

The file 'restaurants_visitors.csv' has the next five columns:

-id: Has the id of a restaurant in Japan and it is unique per restaurant.

-reserve_visitors: Has the amount of visitors that the restaurant of the row had at the date and time of the column visit_datetime.

-visit_datetime: Has the date and the hour of the day.

-visit_date: Has the date extracted from the column visit_datetime.

-reserve_datetime: Hour of the reservation.

The file 'date_info.csv' has the next three columns:

-calendar_date: Has the calendar date

-day_of_week: Has the day of the week that corresponds with the calendar date of the row. Format: ()

-holiday_flg: Has a dummy variable that value 1 if the calendar day is a holiday in Japan and 0 if is not.

The file 'store_info.csv' has the next five columns:

-store_id: Same id that in the ´restaurants_visitors.csv' file.

-genre_name: Genre (type) of the restaurant in the row.

-area_name: City or geological area of the restaurant.

-latitude: Latitude coordinate of the restaurant.

-longitude: Longitude coordinate of the restaurant.

You can send us your answer to the questions 1,2,3, 4 and 5 in any kind of text file. Feel free to solve Q3 and Q4 with any programming language that you feel more comfortable.

Challenge1:

1-Write the SQL queries necessary to generate a list of the five restaurants that have the highest average number of visitors on holidays. The result table should also contain that average per restaurant.

2-Use SQL to discover which day of the week there are usually more visitors on average in restaurants.

3- How was the percentage of growth of the amount of visitors' week over week for the last four weeks of the data? You can solve this question using SQL or any other tool that you prefer. If you use other tools, please add your code or files.

4-Based on the data and your ideas, plan strategies to double the total restaurant visitors in six months.

5-Imagine that these restaurants are in your city (and not in Japan), what other data would you want to join in order of get more insights to increase the visitors?

Optional- Forecast for the next six months, after the last date of the data, the sum of visitors of all the restaurants and validate the accuracy of your forecast.

Part 2 – User Analysis

File order info

Order date

User_id,

Order_id,

Payment_type (Card, cash or other),

Gmv (in cents)

File user info

User id,

First order date,

Last order date,

First order_id

Last order_id

Challenge2:

1- How many active users and new users do we have for each week of November 2019 to February 2020?
2- How many reengaged users do we have (Reengaged: active this week that didn't have an order last week but they did before that) for each week of November 2019 to February 2020?
3- What's the average GMV by type of user (Active, new, reengaged) for each week of November 2019 to February 2020?
4- On your preferred tool (Excel, Python, R, etc.) please create charts for each of your results.
5- Based on the charts give your opinion/recommendations regarding to the different type of users.