Challenge-4

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Welcome! Hope you have watched the lecture videos and followed the instructions in code-along. Go through the steps described below, *carefully*. It is totally fine to get stuck - **ASK FOR HELP**; reach out to your friends, TAs, or the discussion forum on Canvas.

Here is what you have to do,

1. **Pair** with a neighbor and work
2. **Download** the `Challenge-4.pdf` , `Challenge-4.Rmd` and `CommQuest2023_Larger.csv` from Canvas
3. **Move** the downloaded files to the folder, "Week-4" that you created previously
4. **Set** it as the working directory
5. **Edit** content in `Challenge-4.Rmd` wherever indicated following instructions in `Challenge-4.pdf`
6. **Remember** to set `eval=TRUE` in the code chunk to generate the output
7. **Ensure** that `echo=TRUE` so that the code is rendered in the final document
8. **Code output** may not be required in all cases, use your discretion
9. **Inform** the tutor/instructor upon completion
10. **Submit** the document on Canvas after they approve
11. **Attendance** will be marked only after submission
12. Once again, **do not hesitate** to reach out to the tutors/instructor, if you are stuck

Questions

Load the "CommQuest2023_Larger.csv" dataset using the `read_csv()` command and assign it to a variable named "comm_data."

```
# Enter code here
```

Question-1: Communication Chronicles

Using the select command, create a new dataframe containing only the "date," "channel," and "message" columns from the "comm_data" dataset.

Solution:

```
# Enter code here
```

Question-2: Channel Selection

Use the filter command to create a new dataframe that includes messages sent through the "Twitter" channel on August 2nd.

Solution:

```
# Enter code here
```

Question-3: Chronological Order

Utilizing the arrange command, arrange the "comm_data" dataframe in ascending order based on the "date" column.

Solution:

```
# Enter code here
```

Question-4: Distinct Discovery

Apply the distinct command to find the unique senders in the "comm_data" dataframe.

Solution:

```
# Enter code here
```

Question-5: Sender Stats

Employ the count and group_by commands to generate a summary table that shows the count of messages sent by each sender in the "comm_data" dataframe.

Solution:

```
# Enter code here
```

Question-6: Channel Chatter Insights

Using the group_by and count commands, create a summary table that displays the count of messages sent through each communication channel in the "comm_data" dataframe.

Solution:

```
# Enter code here
```

Question-7: Positive Pioneers

Utilize the filter, select, and arrange commands to identify the top three senders with the highest average positive sentiment scores. Display their usernames and corresponding sentiment averages.

Solution:

```
# Enter code here
```

Question-8: Message Mood Over Time

With the group_by, summarise, and arrange commands, calculate the average sentiment score for each day in the "comm_data" dataframe.

Solution:

```
# Enter code here
```

Question-9: Selective Sentiments

Use the filter and select commands to extract messages with a negative sentiment score (less than 0) and create a new dataframe.

Solution:

```
# Enter code here
```

Question-10: Enhancing Engagement

Apply the mutate command to add a new column to the "comm_data" dataframe, representing a sentiment label: "Positive," "Neutral," or "Negative," based on the sentiment score.

Solution:

```
# Enter code here
```

Question-11: Message Impact

Create a new dataframe using the mutate and arrange commands that calculates the product of the sentiment score and the length of each message. Arrange the results in descending order.

Solution:

```
# Enter code here
```

Question-12: Daily Message Challenge

Use the group_by, summarise, and arrange commands to find the day with the highest total number of characters sent across all messages in the "comm_data" dataframe.

Solution:

```
# Enter code here
```

Question-13: Untidy data

Can you list at least two reasons why the dataset illustrated in slide 10 is non-tidy? How can it be made Tidy?

Solution: *Insert your answer here*