BA 데이터애널리틱스 [BA-DA]
Fall 2020
Final Assignment

Scenario

Final assignment will ***extend the midterm assignment***, and you will continue to work on the ***SAME scenario*** of your own that you prepared for the midterm assignment. In the midterm assignment, you proposed two tables of top 10 lists on your own to enhance your understanding about products, customers, employees, and whatnot and to contribute to better decisions for achieving the ultimate goals of every business, namely increasing sales and improving profits.

The ***TWO key tasks*** for the final assignment are as follows:

First, prepare R scripts to create the ***SAME tables*** of the top 10 lists that you came up with for the midterm assignment, but in this final assignment prepare the scripts mainly using functions from the dplyr package just like you did for HW#3.

Second, again just like you did for HW#3, prepare R scripts for ***graphs of your choice*** that you think will help you get further insights from the datasets used to create each table. Try to pick TWO graphs for each table that you think best serve the purpose and prepare R scripts to create the graphs using ggplot2.

Prepare your answers using the template provided in the next page.

[Points for each part]: 200 points in total

- Part I: 100 points

- Part II: 100 points

[Bonus Question]: 40 points (explained at the last page of the template)

[Template]

Your name:

Your student ID:

Part I (100 points): Table 1

[Table 1] ~ title ~ (e.g., Top 10 Customers of …)

- Table output (5 points)

xxxxxxxx	**xxxxxxxx**	**xxxxxxxx**	**xxxxxxxx**	
……	……	……		……
……	……	……		……
……	……	……		……
……	……	……		……
……	……	……		……
……	……	……		……
……	……	……		……
……	……	……		……
……	……	……		……
……	……	……		……

- R scripts (10 points)

- Explanations (10 points)
(Note: Explain the whole flow of your scripts step-by-step as if you are helping other students in class to understand your scripts. Try to make your explanations complete and yet compact, and state them in your own words.)

[Graph 1-1]: ~ title ~

- Graph output (5 points)

- R scripts (10 points)

- Explanations (10 points)
(Note: **First, state briefly what you expected from this graph when you decided to create it.** Then, explain the whole flow of your scripts step-by-step as if you are helping other students in class to understand your scripts. Try to make your explanations complete and yet compact, and state them in your own words.)

[Graph 1-2]: ~ title ~

- Graph output (5 points)

- R scripts (10 points)

- Explanations (10 points)
(Note: **First, state briefly what you expected from this graph when you decided to create it**. Then, explain the whole flow of your scripts step-by-step as if you are helping other students in class to understand your scripts. Try to make your explanations complete and yet compact, and state them in your own words.)

[Key Findings] (25 points)

- State key findings from [Table 1], [Graph 1-1] and [Graph 1-2] combined.
- Do graphs show something that you expected? Briefly explain why, or why not?

Part II (100 points): Table 2

[Table 2] ~ title ~ (e.g., Top 10 Products of …)

- Table output (5 points)

xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxxxxx	
……	……	……		……
……	……	……		……
……	……	……		……
……	……	……		……
……	……	……		……
……	……	……		……
……	……	……		……
……	……	……		……
……	……	……		……
……	……	……		……

- R scripts (10 points)

- Explanations (10 points)
(Note: Explain the whole flow of your scripts step-by-step as if you are helping other students in class to understand your scripts. Try to make your explanations complete and yet compact, and state them in your own words.)

[Graph 2-1]: ~ title ~

- Graph output (5 points)

- R scripts (10 points)

- Explanations (10 points)
(Note: **First, state briefly what you expected from this graph when you decided to create it.** Then, explain the whole flow of your scripts step-by-step as if you are helping other students in class to understand your scripts. Try to make your explanations complete and yet compact, and state them in your own words.)

[Graph 2-2]: ~ title ~

- Graph output (5 points)

- R scripts (10 points)

- Explanations (10 points)
(Note: **First, state briefly what you expected from this graph when you decided to create it.** Then, explain the whole flow of your scripts step-by-step as if you are helping other students in class to understand your scripts. Try to make your explanations complete and yet compact, and state them in your own words.)

[Key Findings] (25 points)

- State key findings from [Table 2], [Graph 2-1] and [Graph 2-2] combined.
- Do graphs show something that you expected? Briefly explain why, or why not?

Bonus question (40 points): SQL vs. R

Compare clauses in the SELECT statement in SQL with functions from the dplyr package in R.

Based on your experiences using both tools to extract or transform data from existing datasets, explain similarities or differences with examples from your own scripts in Part I & II above. Each similarity or difference will be worth 10 points.