**Case Study Overview**

Data Programming in R

Business Analytics Graduate Program

BAIS:6060:0700 Spring 2023 (Full-Time In-Person)

This is an individual assignment. Students can discuss problems in groups but each student must submit individually-prepared solutions.

**Summary of Deliverables and Deadlines**

| **What?** | **When?** | **Where?** |
| --- | --- | --- |
| Solution and code | 11:59 PM on Apr 4 | ICON |

The goal of the case study is to practice data analysis using R and how to make data-driven business decisions using tables and graphs*.* Please follow these steps to achieve this goal:

1. **Purchase the case package ($5) at** [**https://hbsp.harvard.edu/import/1016136**](https://hbsp.harvard.edu/import/1016136)
2. **Read the case document titled “Artea Designing Targeting Strategies”.**
3. **Import 521703-XLS-ENG.xlsx into R and answer the following questions through investigating the data using the techniques from the course.** 
   1. Did Artea’s coupon campaign work?
   2. Should Artea continue sending coupons in the future?
   3. Would Artea be able to increase transactions and revenues with this campaign?
   4. Which proportion of users should Artea target? For example, you answer can be   
      “Nobody gets the coupon”, “Everyone gets the coupon”, “target customers from Facebook”, “target customers with product in shopping cart”, “target customers with no purchase history” and so on.
   5. (Optional) Which of the new users should receive a coupon?
   6. (Optional) By how much would Artea be able to increase transactions and revenues with the campaign?

The answer to each question is not unique, and your answer is correct as long as you can justify them using evidences from data.

Throughout the process, keep track of your work in one or more commented R scripts, and create a single “master” R script containing all the commands necessary to reproduce your analysis, including importing the data into R and producing any graphics. (The master R script is needed so that Prof. Lin can easily check your work.) Please comment your code appropriately.

1. **Prepare a case study report (in PDF format).** Use at least a 12-point font, double space your report, and limit the report to a maximum of 5 pages (including everything). You **don’t** need to introduce the problem and describe the data. Directly discuss your answers to the questions. Remember to provide evidences from the data to support your answers, for example, a table or a graph or even just a few numbers to show the impact of coupons and how the impacts are different on groups of users. Submit by the deadline a single compressed Zip file containing the case study report and your R script(s). Do not submit the dataset.