MIS 4084 Assignment 6: Segmentation and Profiling Using Tableau

**This assignment should be completed individually.**

An Excel file named “Wholesale customers.xlsx” is uploaded on Canvas. It contains information about the clients of a wholesale distributor and the annual spending of each client in thousand dollars on different types of products (e.g., milk, grocery, and detergents paper). The variables in the file include:

* Channels: **1:** Restaurants and hotels, **2:** Retailers (Nominal)
* Region: **1:** South, **2:** West, and **3:** East (Nominal)
* Fresh: Annual spending on fresh products (Continuous)
* Milk: Annual spending on milk products (Continuous)
* Grocery: Annual spending on grocery products (Continuous)
* Frozen: Annual spending on frozen products (Continuous)
* Detergents\_Paper: Annual spending on detergents and paper products (Continuous)
* Delicatessen: Annual spending on delicatessen products (Continuous)

In this assignment, you will perform segmentation and profiling on the dataset.

1. Segmentation: Use the six product variables to segment the customers. To do that, you will add three of the six variables to the rows and the remaining three to the columns, create *clusters*, and then add a variable named Segments to the list of dimensions. Now that the Segments are fixed, you can add or remove variables from the list of rows and columns as it will not affect your segmentation results (you already have the clustering results in the variable named Segments).

Then, answer the following questions:

* 1. How many segments are generated by Tableau automatically?
  2. How many clients are in each segment?

1. Profiling: You will next characterize each segment using different attributes. To do so, you will answer the following questions and provide statistical details and screenshots of the corresponding graphs that you use to answer each question:
   1. How are the segments different in terms of the types and volumes of purchased products? (Hint: Use “Describe clusters” to compare and contrast the segments in terms of the six product types).
   2. How are the segments different in terms of regions? In other words, is there any significant association between specific regions and specific segments of clients?
   3. How are the segments different in terms of channels? In other words, is there any significant association between specific channels and specific segments of clients?

**What to submit**: You will turn in answers to the questions in the form of a word document submitted to Canvas. Again, for each question, provide screenshots (and statistical details, if applicable) that show you have done the task properly. Make sure to include your name in your word file.

**Videos to watch:**

* Visual Analytics
  + Clustering

Note: This assignment is designed based on a dataset that was originally provided here: <http://archive.ics.uci.edu/ml/datasets/Wholesale+customers>