Assignment Instructions: Assignment 1

Purpose

The purpose of this assignment is to set up and use the tools for this course.

Directions

In this assignment, you will accomplish the following:

1. Setup R
2. Setup RStudio
3. Setup a github account

If you planning on using python, then do the following:

1. Setup Python (either as a local environment or as a jupyter notebook). For the local environment, I would recommend Anaconda. For a cloud based setup, use Google Colab.
2. Setup a github account

This assignment will concentrate on using R and Git. Specifically, you will do the following:

1. Download a dataset from the web. You may use any source, but specify the source in your code. Also ensure that the data has a mix of quantitative and qualitative (categorical) variables.
2. Import the dataset into R
3. Print out descriptive statistics for a selection of quantitative and categorical variables.
4. Transform at least one variable. It doesn't matter what the transformation is.
5. Plot at least one quantitative variable, and one scatterplot
6. Upload your R program, and any associated datafiles to your git account. Remember to create a separate repository for this class.
7. Paste the address to your repository in the assignment submission box here in Canvas.

Learning Outcomes

CLO 4: Know how to use software tools (such as R) effectively to implement machine learning algorithms for data mining/visualization and analytics

Requirements

All due dates are included in the Assignment Schedule.

General Submission Instructions

All work must be your own. Copying other people's work or from the Internet is a form of plagiarism and will be prosecuted as such.

1. First, create a new repository in your GitHub account with the following name: **64060_#***username*. Replace *username* with your Kent username (without the @kent.edu).
2. Within that repository, create a new folder for each assignment. As this is Assignment 1, create a new folder called **Assignment_1.**
3. If you are using R, then
    a. Use an R Markdown (.RMD) document, rather than just .R.
    b. Use the R Markdown format to document your file, including explaining the output and steps. Follow the tutorial here to learn how to use R Markdown.
    c. Finally, knit the document into pdf, html, or any other format.
    d. Upload your .Rmd file, the knitted file, and any other relevant file to your Assignment_1 folder on GitHub.
4. If you using Python, then
    a. Use a Jupyter/Google Colab notebook, which will allow you to document your code and output
    b. Share the code into your Assignment_1 folder on GitHub

Provide the link to your git repository in Canvas for the assignment.