CSC 223, Spring 2020, Assignment 7

Purpose: Data Analysis

Due: 11:59pm, Friday, April 17, 2020

Get the assignment code

These instructions assume that your course git repository is set up. Change into your course repository directory and enter the following commands.

```
git fetch assignments
git checkout assignments/master -- assignment8
git commit -a
```

This will copy the `assignment8` directory into your working directory, start tracking the files in the `assignment8` directory, and commit those files to your local git repository.

Assignment Description

Complete the Jupyter Notebook named `assignment8.ipynb`. The dataset for this assignment is described here: `https://vincentarelbundock.github.io/Rdatasets/doc/boot/amis.html`. The dataset contains data from a study into the effect that warning signs have on speeding patterns. Your goal is to determine whether or not you think that warning signs reduced speeding based on the data.

The criteria for this assignment is as follows:

- Use Pandas to read in the data and perform data manipulation.
- Produce an inline figure that summarizes the data in some fashion.
- Write a paragraph in a markdown cell about your interpretation of the results.

One way that you can go about this is:

1. Filter out the rows that have a time period of 1 or 2, that is, only keep data from period 3.
2. Separate the pair data based on whether a warning sign was placed or not.
3. Compute the average speed for each location.
4. Plot a grouped bar chart that compares the average speed for each pair.
5. Interpret the resulting bar chart.

Turning in the Assignment

To turn in the assignment execute the following git commands:

```
git commit -a
git push origin master
```

Note: the most recent commit before the due date will be considered your official submission.

Grading Criteria

- Concise, accurate documentation following the CSC Department documentation guidelines
- Correct implementation of the specification

Note: If your code does not run on the Python 3 interpreter, then you will receive a failing grade for this assignment.