BMI504-Spring 2018

Class 6 Homework

Pulse Data Set:

110 students in an introductory statistics class participated in a simple experiment. The students took their own pulse rate. They were then asked to flip a coin. If the coin came up heads, they were to run in place for one minute. Otherwise they sat for one minute. Then everyone took their pulse again. The pulse rates and other physiological and lifestyle data are given in the data. There was missing data for one student and seemingly incorrect values for heights for two students. These observations were removed resulting in 107 subjects in the final dataset.

(<http://media.news.health.ufl.edu/misc/bolt/Intro/SPSS/PulseDataInformation.pdf)>

Data is in pulse.csv



For all questions, please:

1. Check Assumptions (with things such as plots, visual inspection, knowledge of type of data)
2. Analyze the data using a specific test
3. Do a hypothesis test and state your hypotheses in words and equations (symbols)
4. Make Confidence Intervals and set the confidence level=95%. CI should be two-sided.
5. State a conclusion and interpret your conclusion.

You should turn in a MS Word or Latex PDF AND your R script.

1. Is there an association between exercise and smokes?
2. Is there an association between gender and treatment?
3. Can we conclude students who are drinkers, on average, have a higher weight than students who are non-drinkers?
4. Can we conclude students who sat, on average, have a lower Pulse2 than students who ran?
5. Is the true mean difference between Pulse1 and Pulse2 different than 0?