DALITE Q1 - Histograms, Medians and Means. Due September 12, 2018.

EPIB607 - Inferential Statistics[a]

[a]Fall 2018, McGill University

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This DALITE quiz will cover the basic concepts of histograms, means and medians.

Histogram | Density Plot | Mean | Median | Mode

Marking

Completion of this DALITE exercise will be availble to us automatically through the DALITE website. Therefore **you do not need to hand anything in**. Marks will be based on the number of correct answers. For each question you will receive 0.5 marks for getting the correct answer on the first attempt and an additional 0.5 marks if you stick with the right answer or switch to the correct answer after seeing someone else's rationale.

1. Sign up for DALITE

This step only needs to be completed once for the whole semester:

1. You can join the EPIB607 group by accessing the unique link: https://mydalite.org/en/live/signup/form/NTc4
2. Upon accessing the link, you will be prompted to enter an e-mail address. I recommend using the same e-mail address as your DataCamp account.
3. You never need to remember a username or password to access the DALITE platform; access to your assignments is managed through tokens sent to your e-mail address. You will be sent a new link everytime a new exercise has been posted.

2. Histograms

2.1. Learning Objectives.

1. Understand that the distribution of a variable consists of what values the variable takes and how often.
2. Understand that class intervals should be of equal width; choose appropriate class widths to effectively reveal informative patterns in the data.
3. Understand that the vertical axis of the histogram may be scaled for frequency, proportion, or percentage. The choice of vertical scaling for any data set does not affect the important features revealed by a histogram.
4. Be able to describe a graphical display of data by first describing the overall pattern and then deviations from that pattern. Describe the shape of the overall pattern and identify any gaps in data and potential outliers.
5. Recognize rough symmetry and clear skewness in the overall pattern of a distribution

2.2. Videos.

1. Against All Odds Unit 3

2.3. Required Readings.

1. Against All Odds Unit 3, pages 1-6
2. Visualizing distributions: Histograms and density plots

3. Mean and Median

3.1. Learning Objectives.

1. Understand that graphical descriptions of data are more meaningful when supplemented with numerical measures of center.
2. Know that the median (midpoint or typical value) and mean (arithmetic average) are common measures of center (or location) for a distribution.
3. Understand the formulas used to calculate the median, mean, and mode.
4. Know that the mean and median should be close in symmetric distributions and that the mean is pulled toward the long tail of a skewed distribution. Know that the mean is a nonresistant measure of center because it is strongly influenced by extreme observations and that the median is a resistant measure of center.
5. Be able to choose an appropriate measure of center in practice.

3.2. Videos.

1. Against All Odds Unit 4

3.3. Required Readings.

1. Against All Odds Unit 4, pages 1-6