Lesson 4: Describing Quantitative Data: Center, & Spread

Preparation

Directions: Please fill in Part I as you study the Reading Assignment. Once you finish the reading, complete the questions on Part II. You may use your notes, the key, and the help videos. Be sure to take this completed assignment to your group meeting where you can ask and help answer questions on this assignment.

Problems

Part I: Use the information in the reading assignment to complete these questions.

1. Match the following statistical terms with their appropriate definitions.
   _____ Shape of the distribution
   _____ Center of the distribution
   _____ Spread of the distribution

   a. Average, mean, median, mode
   b. Standard deviation, variance
   c. Symmetric, bell-shaped, skewed right, and skewed left, uniform, unimodal, bimodal, or multi-modal

2. Define standard deviation.

3. Before your Group Preparation session, explain "standard deviation" to a roommate, family member, or other person who has not studied statistics. Describe the experience. How did you explain this idea?

4. Define sample variance.

5. Provide a definition and/or a brief description of the following terms.

Percentiles -

Quartiles -

Five-number summary -

Boxplot -

Part II:

6. If you were saving for retirement, which of these five companies would be the most attractive investment? Justify your answer. **Compared to your answer for this question in lesson 3 (question 5), did it make a difference to compare the spread of the data when making a decision for this problem**

7. Create a table to compute the standard deviation "by hand" using the data Severe Bird Flu Data, available on this github page, (Lesson 03 Describing Quantitative Data; Shape, Center and Spread).