

3.10: Assignment- Scatterplot

In this exercise we will:

- Learn how to create a scatterplot.
- Use the scatterplot to examine the relationship between two quantitative variables.
- Learn how to create a labeled scatterplot.
- Use the labeled scatterplot to better understand the form of a relationship.

In this activity we explore the relationship between weight and height for 81 adults. We will use height as the explanatory variable. Weight is the response variable.

We will then label the men and women by adding the categorical variable gender to the scatterplot. We will see if separating the groups contributes to our understanding of the form of the relationship between height and weight.

Instructions

Click on the link corresponding to your statistical package to see instructions for completing the activity, and then answer the questions below.

[R](#) | [StatCrunch](#) | [Minitab](#) | [Excel](#) | [TI Calculator](#)

Question 1:

Describe the relationship between the height and weight of the subjects. To describe the relationship write about the pattern (direction, form, and strength) and any deviations from the pattern (outliers).

So far we have studied the relationship between height and weight for all of the males and females together. It may be interesting to examine whether the relationship between height and weight is different for males and females. To visualize the effect of the third variable, gender, we will indicate in the scatterplot which observations are males and which are females.

Instructions

Click on the link corresponding to your statistical package to see instructions for completing the activity, and then answer the questions below.

[R](#) | [StatCrunch](#) | [Minitab](#) | [Excel](#) | [TI Calculator](#)

Question 2:

Compare and contrast the relationship between height and weight for males and females. To compare and contrast the relationships by gender write about the pattern (direction, form, and strength) and any deviations from the pattern (outliers) for each group.

Discuss how the patterns for the two groups are similar and how they are different.

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