

What's Going On?

Checking In

Minds on

Extra Extra!

Action!

Errors in Analysis

Consolidation

Erring On Purpose

Learning Goal - I will be able to recognize reasons for misinterpretation in data analysis.

I'm hijacking your RAFT! (kind of)



Minds on

Extra Extra!



Read the five "articles" that make various statistical claims.

Each has at least one error.

For each article, explain the error(s).

Action!

Cause and Effect Relationships

For a cause and effect relationship to exist, a change in the independent variable must result in a change in the dependent variable.

Action!

Errors in Data Analysis

There are several errors that can be made in data analysis.

1. Making conclusions based on too little data.
2. Using linear regression when the correlation is weak.
3. Not considering the effects of outliers.
4. Not considering the effects of influential points.
5. Reversing the cause and effect relationship.
6. Extrapolating outside the range of the data set.
7. Using linear regression for a non-linear relation.
8. Failing to consider a third variable.

Action!

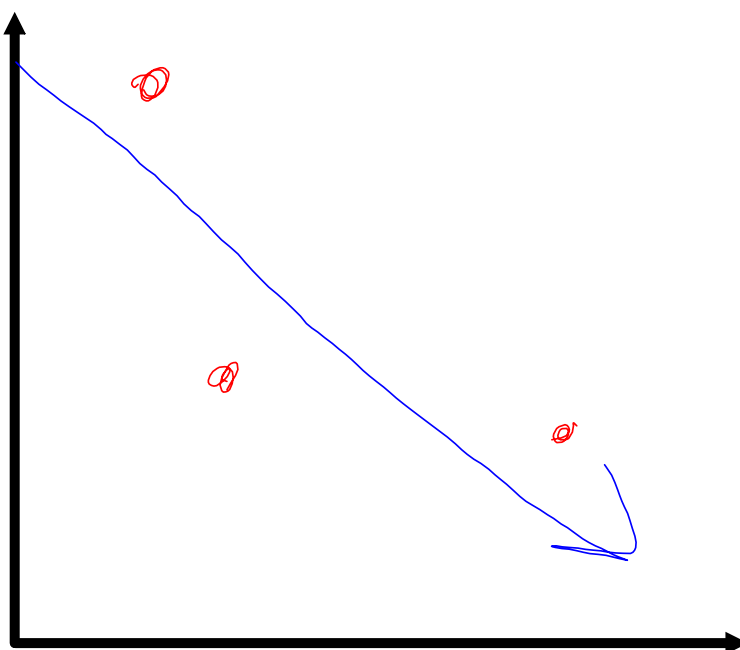
Cause and Effect Relationships

A high correlation for a data set does not always indicate a cause and effect relationship between the two variables. Often, more data and analysis are needed to prove such a relationship exists.

Consolidation

Erring On Purpose

Create a labeled scatterplot and, if necessary, a short statement / inference to illustrate each common error in data analysis.



Consolidation

Apr 3
Homework!

Errors in Data Analysis

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