

Week 6: Regression Analysis

Suppose you are given data from a survey showing the IQ of each person interviewed and the IQ of his or her mother. That is all the information that you have. Your boss has asked you to put together a report showing the relationship between these two variables. What could you present, and why?

This topic was locked Feb 13 at 11:59pm.

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Jan 16, 2022 Jan 16 at 3:15pm

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Dear students,

Welcome to Week 6 discussion.

Suppose you are given data from a survey showing the IQ of each person interviewed and the IQ of his or her mother. That is all the information that you have. Your boss has asked you to put together a report showing the relationship between these two variables. What could you present, and why?

I look forward to reading your posts.

Please, do not forget to participate at least three different days during our week.

Conversational posts are allowed and encouraged, but they **will not count for grading purposes!**

Make sure that **THREE** of your posts for the week are Statistical in nature **AND** a direct response to the problems given above. Remember:

EACH STUDENT NEEDS TO POST A MINIMUM OF 3 TIMES PER WEEK ON 3 DIFFERENT DAYS WITH THE FIRST POST NO LATER THAN WEDNESDAY!

Best,
PM

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[Collapse SubdiscussionKevin Prego](#)

Kevin Prego

Feb 6, 2022 Feb 6 at 9:02am

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Hi Professor & Class,

To demonstrate the type of relationship between the mother IQs and the person IQ, we may display a Scatter plot of the data (person IQs on the y axis, mother IQs on the x-axis). We could also run a linear regression analysis on Mother IQ and Individual IQ to create a model that predicts other people's IQ based on their mothers' IQ.

The scatter points will fall along a line or curve if the variables are correlated. The stronger the correlation, the better the points will fit a linearly in line, also known as a regression line, with a slope of b , the y-intercept a , and a correlation coefficient of r , which will reflect the intensity and direction of a person's IQ relationship with his or her mother IQ.

Thanks,

Kevin
(1 like)

■ [Collapse Subdiscussion Abdullah Jubaer](#)

Abdullah Jubaer

Feb 8, 2022 Feb 8 at 12:31pm

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Hello Kevin and class,

Correlation is a measure of the degree of relatedness of variables. It can help a business analyst determine many things.

There are several measures of correlation are available, the selection of which depends mostly on the level of data being analyzed. Ideally, analysts would like to solve for ρ , the population coefficient of correlation. Business analysts often deal with sample data. The r is one of the widely used sample coefficient of correlation. This measure is applicable only if both variables being analyzed have at least an interval level of data.

The statistic r is the Pearson product-moment correlation coefficient. The term r is a measure of the linear correlation of two variables. It is a number that ranges from -1 to 0 to $+1$,

representing the strength of the relationship between the variables. An r value of $+1$ denotes a perfect positive relationship between two sets of numbers. An r value of -1 denotes a perfect negative correlation, which indicates an inverse relationship between two variables: As one variable gets larger, the other gets smaller. An r value of 0 means no linear relationship is present between the two variables.

Reference: CHAPTER 12 Simple Regression Analysis and Correlation

<https://devry.vitalsource.com/reader/books/9781119591351/epubcfi/6/30%5B%3Bvnd.vst.idref%3DAc07%5D!4> (Links to an external site.)

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[Jonathan Pagan](#)

Jonathan Pagan

Feb 13, 2022 Feb 13 at 12:36pm

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Here we should use the co-relation coefficient, and we can perform linear regression analysis as a technique to set up a relation between a person's IQ with their mother's IQ.

Here we can use a scatter plot also for showing the relation between

Person's IQ to their mother's IQ. A mother's IQ can be plotted on the x-axis and a person's IQ on the y-axis. As we can set up a relation the IQ of people increases as their mother's IQ increases and vice versa.

By doing this analysis we can set up an equation that will clearly show the IQ relationship between a person and their mother.

[Collapse Subdiscussion Penka Marinova](#)

Penka Marinova

Feb 8, 2022 Feb 8 at 8:08pm

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