

Explain what the coefficient of determination is and why it is important

[Science](#), [Statistics](#)



Your full full March 07, The Coefficient of Determination The coefficient of determination is a value that statisticians use to analyze and interpret the differences that occur in any particular variable due to the differences in some other variable. R² or R squared is the symbol used to denote the coefficient of determination because it is the square of correlation value. For example, if there are two score sets on Tests A and B, and they meet somewhere at 0.3, then the coefficient of determination will be 0.09. The coefficient of determination is used to determine the accuracy of regression. There is a direct relationship between the coefficient of determination and the coefficient of correlation, which is used to reflect the linear relationship between two independent and dependent variables. The formula used for the calculation of the coefficient of determination is:

$$R^2 = \text{Explained Variation} / \text{Total Variation} = 1 - (\text{Unexplained Variation} / \text{Total Variation})$$

Where Total Variation = Explained Variation + Unexplained Variation

The coefficient of determination plays an important role in measuring the accuracy of a model, as well as in explaining the logical calculations. In statistical analysis, the resulting coefficient provides an insight into the statistical model's goodness of fit. Moreover, in statistics, this value is also used to indicate the amount of data spread around the linear equation that shows the linear equation of a prediction. These uses show that the value of the coefficient of determination is critical in statistical analysis and interpretation of data.

Works Cited

Not required

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