R squared – How much variance in one variable can be explained by the other?

- Simply square Pearson's r to get r square.

- If we multiple this value by 100, that will be the % of variance explained in one variable by the other.

- For our example on time spent studying and exam score, r squared = 0.4761 as r = 0.69

- This means that about 48% of the variance in exam score is explained by time spent studying. It may not be statistically significant, but you might think it is still meaningful.

Regression

- Regression is where we want to predict the value of one variable (called our Outcome variable) on the basis of the value of one or more predictor variables.

- Simple regression is when we have one predictor, multiple regression is when we have more than one…

- Most commonly used regression type is OLS (ordinary least squares) which works by minimising the distance (deviation) between the observed data and the linear model.