

Bivariate Statistics Exploration

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1 Calculating Mean of X, Y for Datasets

The mean is a commonly used measure of center for a given statistic. To calculate the mean, we can use the following formula: for a given indexed set of values, the mean is written:

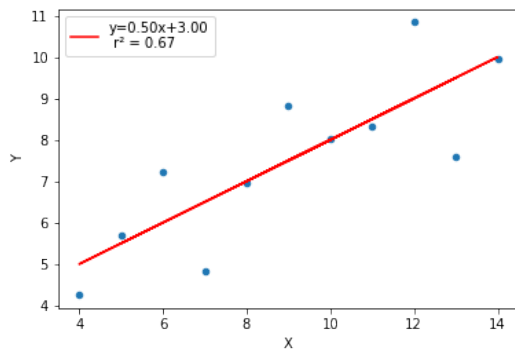
$$\bar{x} = \frac{1}{N} \sum_{i \in I} x_i$$

Where N is the length of the data set. In other words, the mean is the sum of each value divided by the number of values for a given parameter.

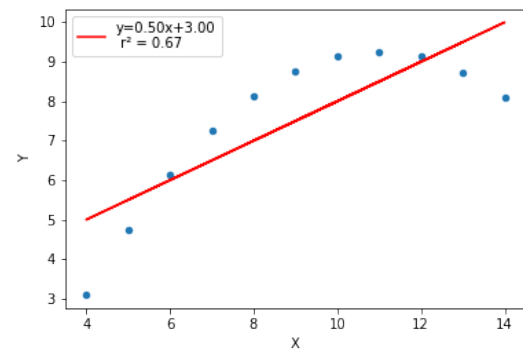
Calculating these values for each dataset we obtain:

	I		II		III		IV	
Data set	<i>x</i>	<i>y</i>	<i>x</i>	<i>y</i>	<i>x</i>	<i>y</i>	<i>x</i>	<i>y</i>
Mean	9.0	7.5	9.0	7.5	9.0	7.5	9.0	7.5

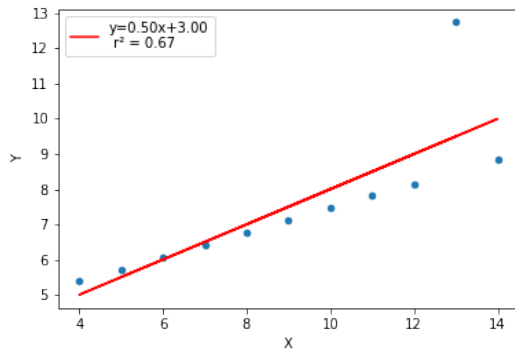
2 Plots



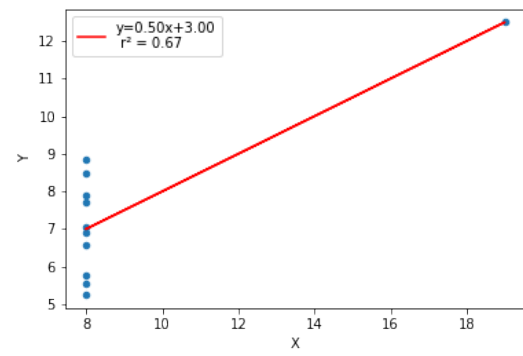
(a) Dataset I



(b) Dataset II



(c) Dataset III



(d) Dataset IV

Figure 1: Plot of Datasets I-IV — X against Y with Lin. Reg.