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Variance is a statistical measurement of the spread between numbers in a data set. It measures how far each number in the set is from the mean (average). It’s also the square of standard deviation.

The variance formula lets us measure this spread from the mean of the random variables by finding the average of the squared differences between each data point and the mean.

So, the larger the variance, the more spread out the data is from the mean.

The Formula for Population Variance The Formula for Sample Variance

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Standard deviation is a statistical measurement that looks at how far individual points in a dataset are dispersed from the mean of that set. If data points are further from the mean, there is a higher deviation within the data set.

it tells you how far, on average, each data point deviates from the central tendency (mean) of the dataset.

It is calculated as the square root of the variance.

Population SD for Ungroup data Population SD for Ungroup data

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