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Probability and Statistics

STAT 341

Write a page report explaining differences between standard deviation and variance. Explain how 2 formulas differ from one another. Save your document and upload to your GitHub repository to get full points.

Standard deviation in simple terms is a measurement of the dispersion of a bunch of numbers from the mean. Variance is the average squared deviations from the mean, while standard deviation is the square root of this number. The variance is the average of all the data points inside a group, whereas the standard deviation is the square root of the variance.

The steps to find the standard deviation and variance also have its differences. The 5 steps of standard deviation are: 1. Find the mean, 2. For each data point, find the square of its distance to the mean, 3. Sum the values from step 2, 4. Divide by the number of data points, and 5. Take the square root.

Variance is seen as a measure of variability, calculated by taking the average of squared deviations from the mean. The 5 steps of variance are: 1. Find the mean, 2. Find each score’s deviation from the mean, 3. Square each deviation from the mean, 4. Find the sum of squares and 5. Divide the sum of squares by n-1 or N.