DIFFERENCE BETWEEN VARIANCE AND STANDARD DEVIATION

Definition:

- **Variance** measures the average squared deviation from the mean.
- **Standard Deviation** is the square root of the variance, representing the average deviation from the mean in the original units.

Units:

- **Variance** is expressed in squared units of the data (e.g., if the data is in meters, variance is in square meters).
- **Standard Deviation** is expressed in the same units as the data (e.g., meters).

Interpretability:

- **Variance** is less intuitive because it's in squared units, making it harder to interpret directly.
- **Standard Deviation** is more interpretable, providing a clear sense of the data's spread in the same units as the original data.

Calculation:

- **Variance** is calculated by taking the mean of the squared deviations from the mean.
- **Standard Deviation** is calculated by taking the square root of the variance.

Use in Comparisons:

- **Variance** is useful in certain statistical models and when working with squared deviations.
- **Standard Deviation** is more commonly used for comparing variability across different datasets or within a single dataset.