

Dispersion

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Measure of Dispersion: \rightarrow Deviation b/w Sample obsⁿ to

- ① Range: $\text{Max} - \text{Min}$ MCT (mean)
- ② Standard deviation (σ): $\sqrt{\frac{\sum (x - \bar{x})^2}{n}}$ RMSE (Root Mean Squared Error)

Square root of Sum of the squares of the deviations taken from sample obsⁿ to mean is called Std

- ③ Variance: σ^2 (Square of Std)
- $$\sigma^2 = \frac{\sum (x - \bar{x})^2}{n} \quad \text{Mean Squared Error (MSE)}$$

$$\begin{array}{l} \text{Var} = 10000, \text{SD} = (100) \rightarrow \\ \hline \text{Var} = (0.002), \text{SD} = 0.04 \\ \downarrow \end{array}$$