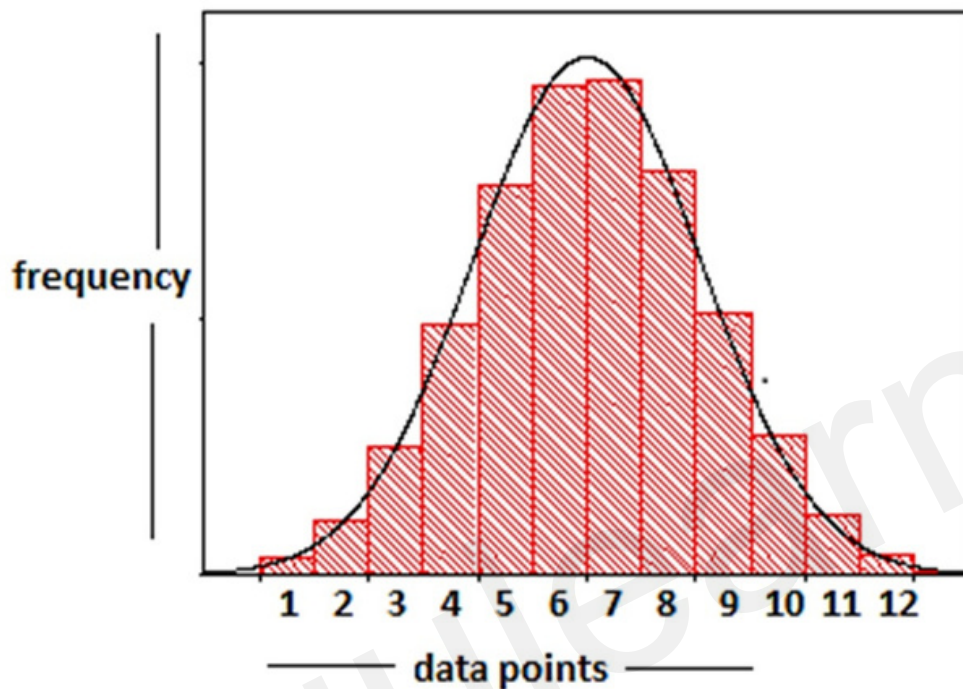


Geography Practical

Dispersion of Data



Dispersion measures the extent to which data points deviate from the central tendency, such as the mean or median. It quantifies the spread or variability within a dataset, providing insights into the distribution's shape and the degree of its scattering, aiding in understanding the data's consistency and potential outliers.

Geography Practical

Dispersion of Data

Range:

It is the simplest measure of dispersion, calculated by subtracting the minimum value from the maximum value in the dataset. While easy to compute, it can be heavily influenced by outliers.

Interquartile Range (IQR):

This measure involves calculating the difference between the third quartile (Q3) and the first quartile (Q1). It provides a measure of the spread of the middle 50% of the data, making it more robust to outliers compared to the range.

Variance: The variance quantifies the average squared deviation of data points from the mean. It gives a comprehensive understanding of how much individual data points deviate from the mean, but it is sensitive to outliers due to the squaring of differences.

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Dispersion of Data

Standard Deviation:

This is the square root of the variance and is widely used due to its intuitive interpretation. It measures the average distance of data points from the mean, providing a sense of the typical deviation within the dataset.

Mean Absolute Deviation (MAD):

MAD calculates the average absolute deviation of data points from the mean, making it more robust to outliers compared to variance. However, it can be less sensitive to variation in the data.

Coefficient of Variation (CV): It is the ratio of the standard deviation to the mean, expressed as a percentage. It provides a relative measure of dispersion, allowing comparison of variability across different datasets with varying means.

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