Methods for Estimating Missing Values

1. Omit (Deletion Method)

Remove rows or columns with missing values. This is simple but can lead to data loss if many values are missing.

2. Mean/Median Imputation

Replace missing values with the mean (for continuous data) or median (if data has outliers). This maintains overall distribution but may reduce variance.

3. Mode Imputation

Replace missing categorical values with the most frequent category. This is useful for categorical data but can introduce bias if one category dominates.

4. Interpolation

Estimate missing values based on trends in the data, such as linear or polynomial interpolation. Works well for time-series data.