UNIT-II: Descriptive Statistics

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Classification and Tabulation of Univariate Data

1. Classification: Organizing data into meaningful categories based on attributes or characteristics.
   2. Tabulation: Arranging data in a systematic manner in rows and columns for easy analysis.

Graphical Representation

1. Histogram: A graphical representation of data using bars of different heights.
   2. Pie Chart: A circular statistical graphic divided into slices.
   3. Box Plot: A method for graphically depicting groups of numerical data through quartiles.

Frequency Curves

A smooth curve representing the distribution of frequency over a set of values. Examples include normal distribution curves and skewed distribution curves.

Descriptive Measures

1. Central Tendency:
   - Mean: The average of a dataset.
   - Median: The middle value when data is arranged in order.
   - Mode: The most frequently occurring value in a dataset.
   2. Dispersion:
   - Range: Difference between the maximum and minimum values.
   - Variance: The measure of data spread around the mean.
   - Standard Deviation: The square root of variance, indicating the spread of data.

Bivariate Data

Data involving two variables that can be analyzed for relationships and dependencies.

Summarization

Summarizing large datasets using numerical and graphical techniques to extract useful information.

Marginal and Conditional Frequency Distribution

1. Marginal Frequency Distribution: The distribution of individual categories in a dataset without considering relationships.
   2. Conditional Frequency Distribution: The distribution of one category given the occurrence of another category.