

distributions and their associated fields:-

1. Normal distribution: Also known as the Gaussian distribution, it is commonly used in statistics and probability theory, as well as in natural sciences, engineering, economics, and finance.

2. Poisson distribution: It is widely used in actuarial science, finance, insurance, and telecommunications to model counting processes such as the number of claims, calls, or accidents.

3. Binomial distribution: It is used in experiments and trials where the outcome can either be a success or a failure, and the aim is to determine the probability of a certain number of successes. It is commonly used in statistics, finance, and quality control.

4. Exponential distribution: It is frequently used in queuing theory, reliability, management science, and life testing to model the time between events that follow a Poisson process.

Confidence interval:-

Confidence interval is a statistical technique that is used to estimate a population parameter (such as a mean or proportion) based on a sample from that population. The confidence interval gives us a range of values within which we are confident that the population parameter falls. It is usually expressed as a range of values, with a level of confidence associated with it (such as 95% or 99%).

Some types of statistical tests:-

T-test: T-tests are used to compare two means to determine if they are statistically significant. This test is often used when the sample size is small.

2. ANOVA (Analysis of Variance): ANOVA is used to compare means when there are three or more groups. It is used to determine whether there is a significant difference between the groups. 3. Chi-Square test: The Chi-Square test is used to determine whether there is a relationship between two categorical variables. It measures the degree of association between the variables. 4. Regression analysis: Regression analysis is used to determine the relationship between two or more continuous variables. It estimates the strength and direction of the relationship. 5. Correlation analysis: Correlation analysis is used to determine the relationship between two continuous variables. It measures the degree of association and direction of the relationship.

Covariance

Covariance is a statistical measure that describes the extent to which two variables are linearly related. It measures the joint variability of two random variables and indicates how much they change together. In other words, it describes the directional relationship between two variables.