Glossary

1. Array

Numerical data linearly ordered by magnitude.

2. Bivariate

Involving two random variables, not necessarily independent of one another

3. Bivariate Normal Distribution

The bivariate normal distribution is the generalisation of a normal distribution for a single variate.

4. Correlation

It is the simultaneous change in value of two numerically valued random variables.

5. Distribution

A set of numbers and their frequency of occurrence collected from measurements over a statistical population.

6. Expectation

The expected value of a random variable.

7. Function

A variable so related to another that for each value assumed by one there is a value determined for the other.

8. Homoscedastic

It is having one variable whose variance is the same for all values of the other or others.

9. Integral

A number computed by a limiting process in which the domain of a function, often an interval or planar region, is divided into arbitrarily small units, the value of the function at a point in each unit is multiplied by the linear or areal measurement of that unit, and all such products are summed.

10. Moment Generating Function

In probability theory and <u>statistics</u>, the moment-generating function of any random variable is an alternative definition of its <u>probability distribution</u>. Thus, it provides the basis of an alternative route to analytical results compared with working directly with <u>probability density functions</u> or <u>cumulative distribution functions</u>.

11. Normal Distribution

A theoretical frequency distribution for a set of variable data, usually represented by a bell-shaped curve symmetrical about the mean.

12. Parameter

In Statistics, a quantity, such as a mean, that is calculated from data and describes a population.

13. Probability Density Function

In probability theory, a probability density function (pdf), or density of a continuous random variable is a function that describes the relative likelihood for this random variable to occur at a given point.

14. Variable

It is a quantity capable of assuming any of a set of values.

15. Variance

The square of the standard deviation.