

## Glossary

### **1. Mean**

The mean or average is the sum of the numbers divided by the total number of data points.

### **2. Population**

The entire aggregation of items from which samples can be drawn

### **3. Sample**

A portion drawn from a population, the study of which is intended to lead to statistical estimates of the attributes of the whole population

### **4. Standard Deviation**

In statistics and probability theory, standard deviation (represented by the symbol  $\sigma$ ) shows how much variation or "dispersion" exists from the average (mean, or expected value).

### **5. Variance**

In probability theory and statistics, the variance is used as one of several descriptors of a distribution. It describes how far values lie from the mean.

### **6. Estimation**

Estimation theory is a branch of statistics and signal processing that deals with estimating the values of parameters based on measured/empirical data that has a random component.

### **7. Interval estimates**

Interval estimation is the use of sample data to calculate an interval of possible (or probable) values of an unknown population parameter

### **8. Point estimates**

Point estimation involves the use of sample data to calculate a single value (known as a statistic) which is to serve as a "best guess" or "best estimate" of an unknown (fixed or random) population parameter.

### **9. Confidence Interval**

A confidence interval (CI) is a kind of interval estimate of a population parameter and is used to indicate the reliability of an estimate.

### **10. Confidence Level**

The probability that the value of a parameter falls within a specified range of values

### **11. Confidence Limit**

Either of the extreme values of a confidence interval

### **12. Simple Random Sample**

A simple random sample is a subset of individuals (a sample) chosen from a larger set (a population).

### **13. Standard Error**

The standard error is the standard deviation of the sampling distribution of a statistic.

### **14. Coefficient**

A coefficient is a multiplicative factor in some term of an expression (or of a series); it is usually a number, but in any case does not involve any variables of the expression.

### **15. Margin of Error**

Margin of error is a statistic expressing the amount of random sampling error in a survey's results.