

## Glossary

### **1. Mean**

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

### **2. Variance**

The variance is a numerical value used to indicate how widely individuals in a group vary.

### **3. Population**

In statistics, population refers to the total set of observations that can be made.

### **4. Cumulative probability**

A cumulative probability refers to the probability that the value of a random variable falls within a specified range.

### **5. Quantiles**

Each of any set of values of a variate that divide a frequency distribution into equal groups, each containing the same fraction of the total population is a Quantile.

### **6. Random Number**

A random number is a number determined totally by chance. That is, the number has no predictable relationship to any other number or event.

### **7. Random variable**

When the value of a variable is the outcome of a statistical experiment, that variable is a random variable.

### **8. Range**

The range is a simple measure of variation in a set of random variables. It is difference between the biggest and smallest random variable.

### **9. Probability Mass Function**

In probability theory and statistics, a probability mass function (pmf) is a function that gives the probability that a discrete random variable is exactly equal to some value.

### **10. Simulation**

Simulation is a way to model random events to gain insight on the real world.

### **11. Discrete distribution**

If a random variable is a discrete variable, its probability distribution is called a discrete probability distribution.

### **12. Binomial distribution**

The probability distribution of a binomial random variable is called a binomial distribution (also known as a Bernoulli distribution).

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### **14. Poisson distribution**

The probability distribution of a Poisson random variable is called a Poisson distribution.

### **15. Geometric Distribution**

The geometric distribution is a special case of the negative binomial distribution . It deals with the number of trials required for a single success. Thus, the geometric distribution is a negative binomial distribution where the number of successes ( $r$ ) is equal to 1.