Glossary

1. **Conditional Expectation**
   In probability theory, a conditional expectation (also known as conditional expected value or conditional mean) is the expected value of a real random variable with respect to a conditional probability distribution.

2. **Conditional Variance**
   In probability theory and statistics, a conditional variance is the variance of a conditional probability distribution.

3. **Discrete**
   Discrete means individually separate & distinct.

4. **Discrete Random Variable**
   A random variable is called discrete if it can assume finite number of values.

5. **Continuous Random Variable**
   A continuous random variable is a random variable where the data can take infinitely many values.

6. **Conditional Distribution**
   Given two jointly distributed random variables X and Y, the conditional probability distribution of Y given X is the probability distribution of Y when X is known to be a particular value. If the conditional distribution of Y given X is a continuous distribution, then its probability density function is known as the conditional density function.

7. **Condition**
   Condition can be essential quality, property or attribute; it can be circumstances affecting the function or existence of something.

8. **Hypothesis**
   A hypothesis is a proposed explanation for a phenomenon; for a hypothesis to be a scientific hypothesis, the scientific method requires that one can test it.

9. **Random**
   Random decisions are made, done or happened without method or conscious.

10. **Symbolic**
    Symbolic represents the symbol which involves the use of symbols or symbolism or formulas etc.

11. **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 take on a given value.

12. **Joint Probability Distribution**
    A statistical measure where the likelihood of two events occurring together and at the same point in time is calculated; joint probability is the probability of event Y occurring at the same time event X occurs.

13. **Random Variable**
    In probability and statistics, a random variable or stochastic variable is a variable whose value is subject to variations due to chance.

14. **Variables**
    Variables are not consistent in nature; it does not have a fixed pattern; liable to vary.

15. **Mutually Exclusive**
    The two events are 'mutually exclusive' if they cannot occur at the same time. An example is tossing a coin once, which can result in either heads or tails, but not both.