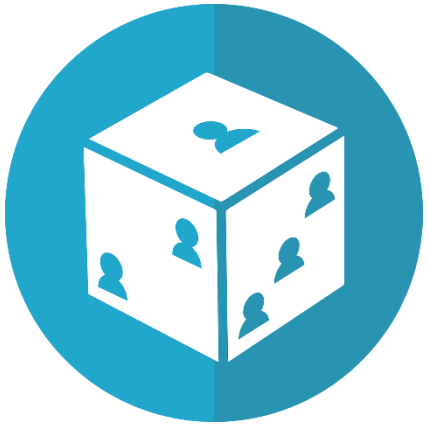
Siddhardhan

Random Variables;
Types of Random Variables



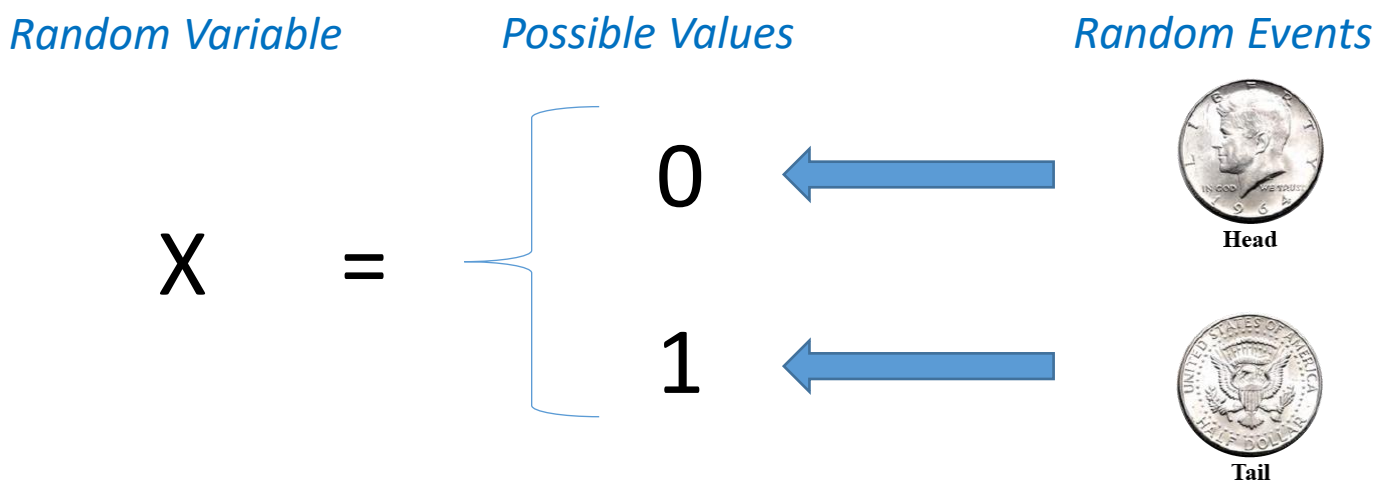
Math for Machine Learning

Random Variables

A Random Variable is a numerical description of the outcomes of Random events.

In other words, a random variable maps the outcomes of random events to numerical values.

Consider Tossing a Coin



Random Variables

Few Examples of Random Variables:

$$X = \begin{cases} 0, & \text{if Heads} \\ 1, & \text{if Tail} \end{cases}$$

Y = Weight of a random person in a class

P (Weight of a random person in a class is less than 60 kg)

P (Y < 60)

Applications:

- Turnover of a company in a given time period.
- Price change of an asset over a given time period

Types of Data

Random Variables

Discrete

A discrete random variable takes only discrete or distinct values.

Examples: Coin toss, Colour of the ball.

Continuous

A continuous random variable can take any value in a given range.

Examples: weight of a random person in a class.