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[Uniform Distribution]

↳ This uniform says equally likely

- uniform distribution are probability distributions with equally likely outcomes.
- In a discrete uniform distribution, outcomes are discrete and have the same probability.
- In a continuous uniform distribution, outcoms are continous and infinite.
- In normal distribution, data around the mean occur more frequently.
- The frequency of occurance decreases the farther you are from the mean in a normal distribution.

Example :- Rolloing a die.
die has Six Sides.

cdf → Remains same for all the Types Distribution.

$\frac{1}{b-a} = \frac{1}{100-1} = \frac{1}{99}$

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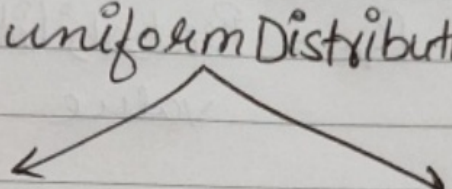
It is possible to roll 1 to 6

* There Are Two Types of uniform Distribution.



Continuous uniform Distribution. (0 to 1)

Discrete uniform Distribution.

→ The possible results of rolling a die provide an example of a discrete uniform distribution. It is possible to roll a 1, 2, 3, 4, 5 or 6, but it is not possible to roll a 2.3, 3.3, 4.7 or 5.5 Therefore, the roll of a die generates a discrete distribution with $p = \frac{1}{6}$ for each outcomes. There are only 6 possible values to return and nothing in between

⇒ uniform distribution is a probability distribution that asserts that the outcomes for a discrete set of data have the same probability.

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⇒ formula for uniform Distribution

$$P_x = 1/n$$

Where :-

P_x = Probability of a discrete value

n = Number of values in the range