Random Variable (R.V)

Pandom Variable is a function that assigns

Values to each of an experiment's outcomes.

Question 1

step 1:- R.E -> Tossing two Coins.

Step 2: 5.5 -> { HH, HT, TH, TT}

step 31. R.N -> X -> Counting the no. of Heads.

Random Vasiable (is denoted by x) X= {6, 1,2} when o heads

Step 4: Calculate the probability for R.V (TT) Head

This is $\frac{1}{2} = P(x=0) = \frac{1}{4} \{ TT \}$ This is $\frac{1}{2} = P(x=1) = \frac{2}{4} = \frac{1}{2} \{ HT, TH \}$ as $\frac{1}{4} = P(x=2) = \frac{1}{4} \{ HH \}$ Phobability Distribution.

Step 5- plot the Probability Didribution

(ov)

PMF (Probability Mars Fuel)

Plot of probability Distribution

(or)

Photo of PMF

> Random Variable is at two types

+ Discrete R.V -> PMF Probability Mars Luxbon Random Vagiable Flot Continuous R.V -> PDF (R.V) probability Density function

Example:

Question

step 1: RE -> Ralling a dice

step 2:- 5.5 -> {1,2,3,4,5,6}

R.V -> Getting a 6'is Success.

Hoter- Let, Success -> 1

Lee, Suuvi failure ->0 5.5 -> \{QQQ,Q,QQ,

- Y= { 0,13

Step 4!- Probability Distribution

P(Y=0) = { 1,2,3,4,5,6} =

P(Y=1) =

Random

Variables

Continuous

Continuous

Continuous

Normal Distribution

Auture

Pareto.