

Explain the following things point wise in brief of r language

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Sure, here are the explanations of the R concepts you mentioned:

C function

A C function is a reusable block of code that can be called from other R scripts. C functions are often used to perform computationally intensive tasks that would be slow or difficult to do in R.

Histogram

A histogram is a graphical representation of the distribution of data. It shows the number of observations that fall within each range of values. Histograms are often used to visualize the shape of a distribution, such as whether it is normal, skewed, or kurtosis.

Rnorm

The Rnorm function generates a random sample from a normal distribution. The function takes two arguments: the mean and standard deviation of the distribution.

Pnorm

The Pnorm function calculates the probability that a standard normal variable will be less than or equal to a specified value. The function takes one argument: the value of the standard normal variable.

Skewness definition

Skewness is a measure of the asymmetry of a distribution. A distribution is skewed if the mean, median, and mode are not all the same value. A distribution with a positive skew has a longer tail on the right side, while a distribution with a negative skew has a longer tail on the left side.

Kurtosis definition

Kurtosis is a measure of the peakedness of a distribution. A distribution is kurtosis if the tails of the distribution are thicker or thinner than a normal distribution. A distribution with a positive kurtosis has thicker tails, while a distribution with a negative kurtosis has thinner tails.

Normal distribution

The normal distribution is a bell-shaped distribution that is often used to model real-world data. The normal distribution is defined by its mean and standard deviation.

Parameters of rnbinom

The rnbinom function generates a random sample from a negative binomial distribution. The function takes three arguments: the number of successes, the probability of success, and the size of the sample.

How to save a file in Rstudio

To save a file in Rstudio, you can use the following code:

Code snippet

```
Save(object, file = "filename.RData")
```

Use code with caution. [Learn more](#)

This code will save the object object to the file filename.RData.

Parameters of rpois

The rpois function generates a random sample from a Poisson distribution. The function takes one argument: the mean of the distribution.

Skewness

The skewness of a distribution can be calculated using the following code:

Code snippet

```
Skewness(data)
```

Use code with caution. [Learn more](#)

This code will calculate the skewness of the data in the variable data.

Kurtosis

The kurtosis of a distribution can be calculated using the following code:

Code snippet

```
Kurtosis(data)
```

Use code with caution. [Learn more](#)

This code will calculate the kurtosis of the data in the variable data.

C full form rbinom

The full form of rbinom is random binomial. The rbinom function generates a random sample from a binomial distribution.

Dbinom

The dbinom function calculates the probability that a binomial variable will be equal to a specified value. The function takes three arguments: the number of successes, the probability of success, and the number of trials.

Parameters of gamma function

The parameters of the gamma function are the shape parameter and the scale parameter. The shape parameter controls the shape of the distribution, while the scale parameter controls the mean of the distribution.

Keyword to plot a histogram

The keyword to plot a histogram in R is hist(). The hist() function takes one argument: the data to be plotted.

I hope this is helpful! Let me know if you have any other questions.

Enter a prompt here

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Binomial Distribution

```
dbinom(2,30,0.2) # binomial distribution
```

```
Prob1 = dbinom(c(0:50),50, 0.25) # array of binomial distribution
```

```
Prob1
```

```
plot(c(0:50),Prob1)
```

```
Prob2 = dbinom(c(0:50),50, 0.85) # the graph shifts because mean = np and mean shifts for greater p... np > 5 so the graph is approximated to standard normal distribution
```

```
Prob2
```

```
plot(c(0:50),Prob2)
```

```
Prob3 = pbinom(c(0:50), 50, 0.25) # array of cdf of Prob1
```

```
plot(c(0:50), Prob3)
```

```
#qbinom
```

```
#rbinom
```

```
y = rbinom(1000,50,0.25)
```

```
hist(y)
```

Poisson random variable

```
# dpois(k, lambda) gives  $P(X = k) = \text{Prob}$ 
```

```
# where  $X \sim \text{Poisson}(\lambda)$ 
```

```
# to get a PMF of poisson distribution
```

```
# PMF = dpois(x[pass an array] ,lambda)
```

```
# discrete single point
```

```
y = 5
```

```
prob = dpois(y,50) # prob at y = 5
```

```
grph = plot(y, prob) # plotting the the point and prob at the point on the graph
```

```
grph
```

```
# sequence of points
```

```
x = seq(1,100)
```

```
pmf = dpois(x,50)
```

```
graph = plot(x, pmf)
```

```
graph
```

SOME MORE FORMULAS

```
# dpois -> PMF,  
# ppois -> CDF,  
# qpois -> Quantile Calculation,  
# rpois -> random number generation
```

LEAF AND STEM

```
x = c(72, 39, 91, 48, 105, 69, 72, 31, 47, 21, 52, 67, 48, 39, 26)  
stem(x, scale = 2)
```

boxplot

```
x = seq(1, 10)  
y = c(90, 24, 24, 36, 49, 58, 39, 20, 10, 38, 100, 150)  
boxplot(x, y, xlab = c("AIDS-B1", "AIDS-B2"), ylab = "Marks", main = "MArks Distribution",  
varwidth = FALSE, col = c("red", "blue"))
```

```
# time sequence plots
```