

How can quartiles be found and visualized in R?

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In R, quartiles can be found and visualized using various functions and packages. One way is to use the "summary" function, which provides a summary of the data including the quartiles. Another way is to use the "quantile" function, which allows for the calculation of specific quartiles. Additionally, packages such as "ggplot2" can be used to create visualizations of the quartiles, such as box plots or density plots. These methods allow for a clear understanding of the distribution and central tendency of the data, making it easier to analyze and interpret.

Find and Visualize Quartiles in R

Quartiles are values that split up a dataset into four equal parts.

The first quartile represents the 25th percentile of a dataset. The second quartile represents the 50th percentile of a dataset. This value is equivalent to the median value of the dataset. The third quartile represents the 75th percentile of a dataset.

We can easily calculate the quartiles of a given dataset in R by using the `quantile()` function.

This tutorial provides examples of how to use this function in practice.

Calculating Quartiles in R

The following code shows how to calculate the quartiles of a given dataset in R:

```
#define dataset
```

```
data = c(4, 7, 12, 13, 14, 15, 15, 16, 19, 23, 24, 25, 27, 28,  
33)
```

```
#calculate quartiles of dataset  
quantile(data)
```

```
0% 25% 50% 75% 100%  
4.0 13.5 16.0 24.5 33.0
```

Here's how to interpret the output:

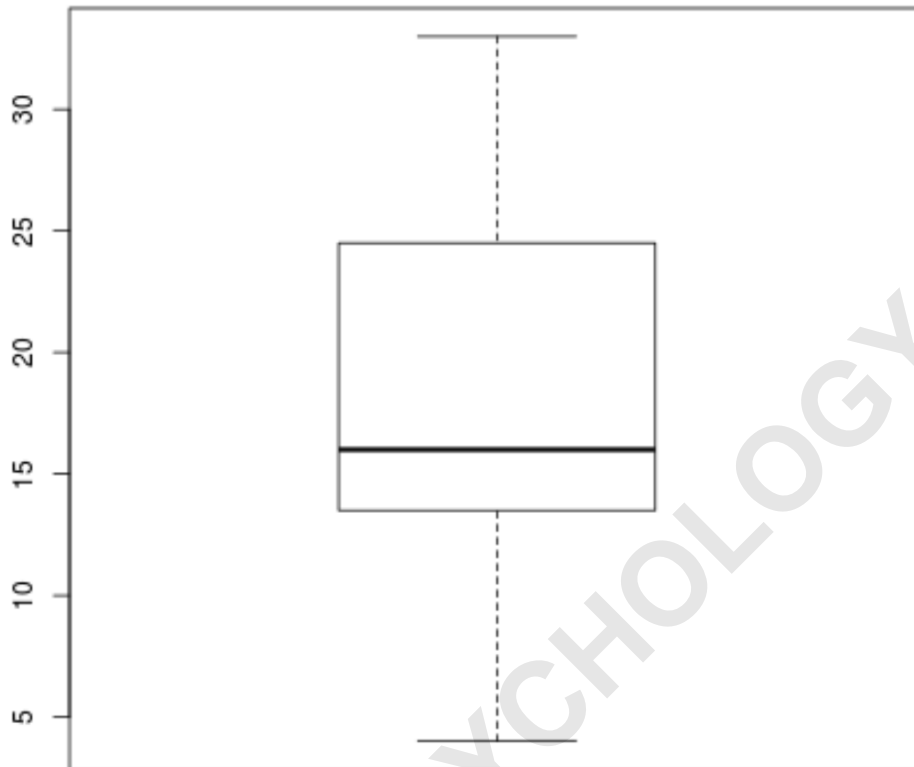
The first value displays the minimum value in the dataset: 4.0
The second value displays the first quartile of the dataset: 13.5
The third value displays the second quartile of the dataset: 16.0
The fourth value displays the third quartile of the dataset: 24.5
The fifth value displays the maximum value in the dataset: 33.0

How to Easily Calculate Percentiles in R

Visualizing Quartiles in R

We can use the `boxplot()` function to create a boxplot to visualize the quartiles of this dataset in R:

```
#create boxplot  
boxplot(data)
```



Here's how to interpret the boxplot:

The bottom "whisker" displays the minimum value of 4. The bottom line of the box displays the first quartile value of 13.5. The black bar in the middle of the box displays the second quartile value of 16.0. The top line of the box displays the third quartile value of 24.5. The top "whisker" displays the maximum value of 33.0.

This single plot helps us quickly visualize the distribution of values in the dataset.

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