

How can I add a vertical line to a histogram in R?

Authored by
stats writer

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To add a vertical line to a histogram in R, one can use the "abline" function. This function allows the user to add a line at a specified location on the histogram, either by specifying a specific number or by using a variable. This feature can be useful for highlighting a specific value or range on the histogram, providing additional information to the viewer. The "abline" function offers flexibility in terms of line placement and can be easily customized to suit the needs of the user. It is a simple and effective tool for enhancing the visual representation of data in a histogram.

Add Vertical Line to Histogram in R

You can use the following methods to add a vertical line to a histogram in R:

Method 1: Add Solid Vertical Line at Specific Location

```
abline(v=2)
```

This syntax adds one vertical line to the histogram at $x=2$.

Method 2: Add Customized Vertical Line at Specific Location

```
abline(v=mean(data), col='red', lwd=3, lty='dashed')
```

This syntax adds one vertical red dashed line with a width of 3 at the mean value of the histogram.

Method 3: Add Multiple Customized Vertical Lines

```
abline(v=quantile(data, .25), col='red',  
lwd=3)abline(v=quantile(data, .75), col='blue', lwd=3)
```

This syntax adds a red vertical line at the first quartile and a blue vertical line at the third quartile of the histogram.

The following examples show how to use each method in practice.

Example 1: Add Solid Vertical Line at Specific Location

The following code shows how to create a histogram and add a vertical line at $x=2$:

```
#make this example reproducible  
set.seed(1)
```

```
#create data
```

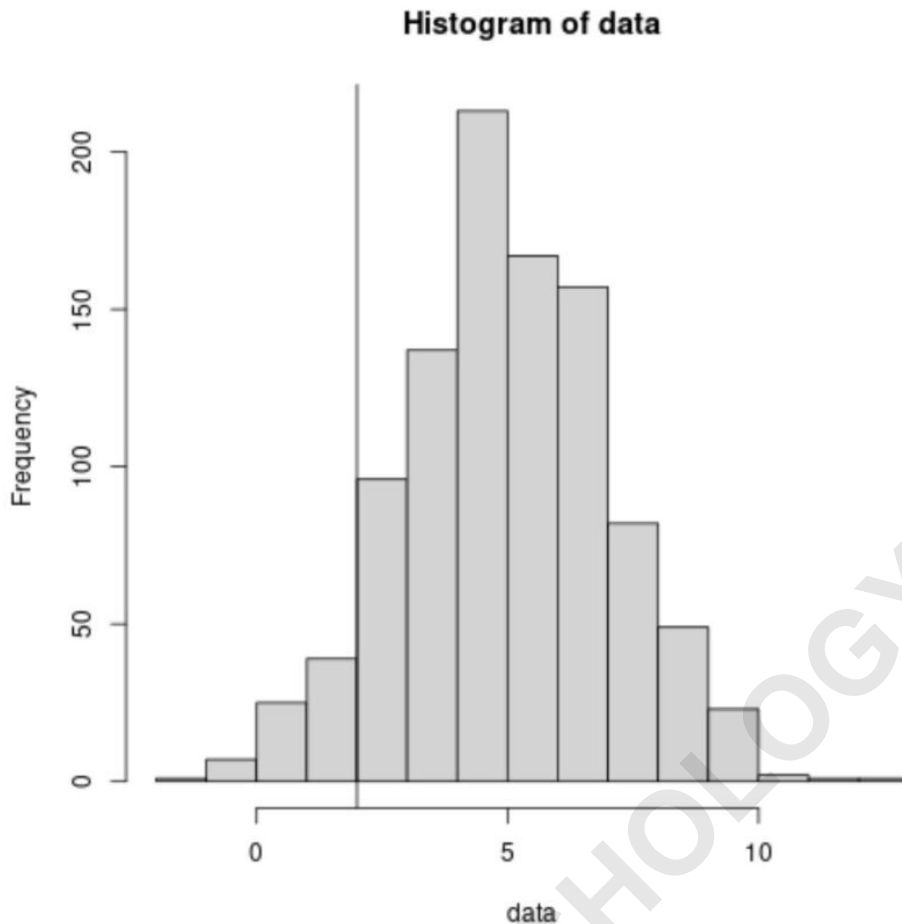
```
data <- rnorm(n=1000, mean=5, sd=2)
```

```
#create histogram to visualize distribution of data
```

```
hist(data)
```

```
#add vertical line at  $x=2$ 
```

```
abline(v=2)
```



Example 2: Add Customized Vertical Line at Specific Location

The following code shows how to create a histogram and add one vertical red dashed line with a width of 3 at the mean value of the histogram:

```
#make this example reproducible
```

```
set.seed(1)
```

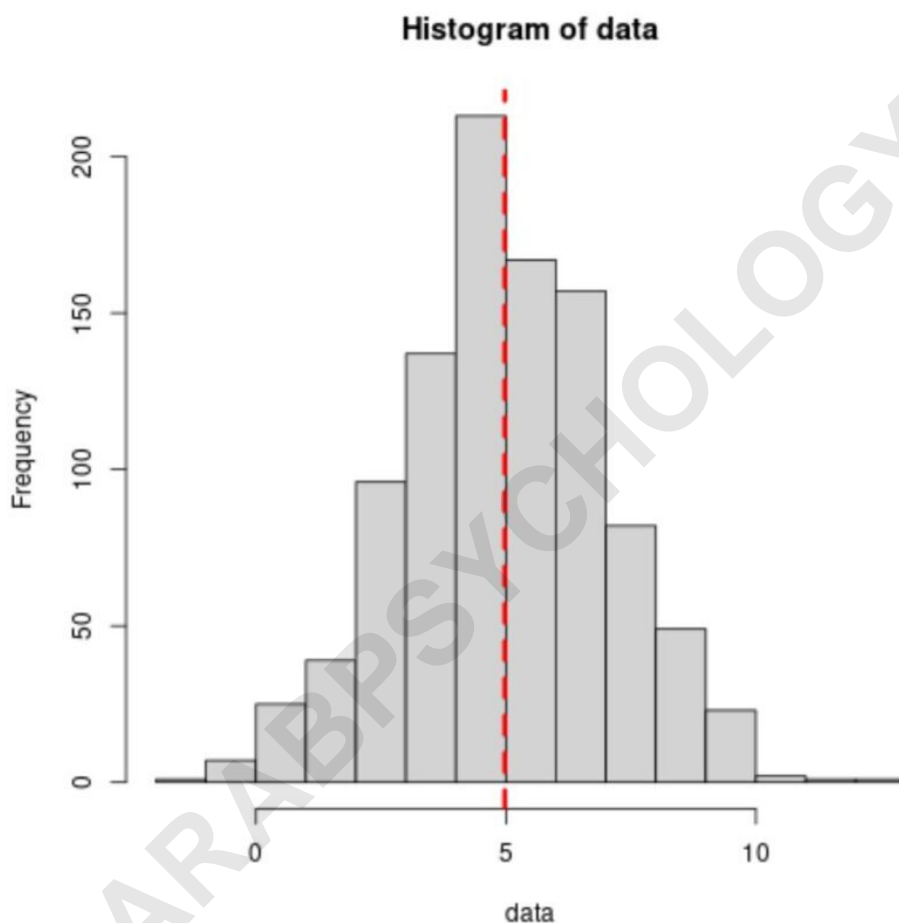
```
#create data
```

```
data <- rnorm(n=1000, mean=5, sd=2)
```

```
#create histogram to visualize distribution of data  
hist(data)
```

```
#add vertical line at mean value
```

```
abline(v=mean(data), col='red', lwd=3, lty='dashed')
```



Example 3: Add Multiple Customized Vertical Lines

The following code shows how to create a histogram and add a red vertical line at the first quartile and a blue vertical line at the third quartile of the histogram.

```
#make this example reproducible  
set.seed(1)
```

```
#create data
```

```
data <- rnorm(n=1000, mean=5, sd=2)
```

```
#create histogram to visualize distribution of data  
hist(data)
```

```
#add vertical lines at 1st and third quartiles
```

```
abline(v=quantile(data, .25), col='red', lwd=3)
```

```
abline(v=quantile(data, .75), col='blue', lwd=3)
```

