How can horizontal boxplots be created in R?

Authored by

stats writer

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Horizontal boxplots in R can be created using the "boxplot" function. This function takes in a numerical vector or a data frame as input and produces a graphical representation of the data's distribution. To create a horizontal boxplot, the "horizontal" argument must be set to "TRUE" within the function. Additionally, other parameters such as labels, colors, and titles can be customized to enhance the visual presentation of the boxplot. This method is useful for visualizing and comparing the distribution of multiple datasets or variables side by side. Overall, creating horizontal boxplots in R is a simple and effective way to display and analyze numerical data.

Create Horizontal Boxplots in R

A (sometimes called a box-and-whisker plot) is a plot that shows the five-number summary of a dataset, which includes the following values:

MinimumFirst QuartileMedianThird QuartileMaximum

To create a horizontal boxplot in base R, we can use the following code:

#create one horizontal boxplot
boxplot(df$values, horizontal=TRUE)

#create several horizontal boxplots by group
boxplot(values~group, data=df, horizontal=TRUE)

And to create a horizontal boxplot in , we can use the following code:

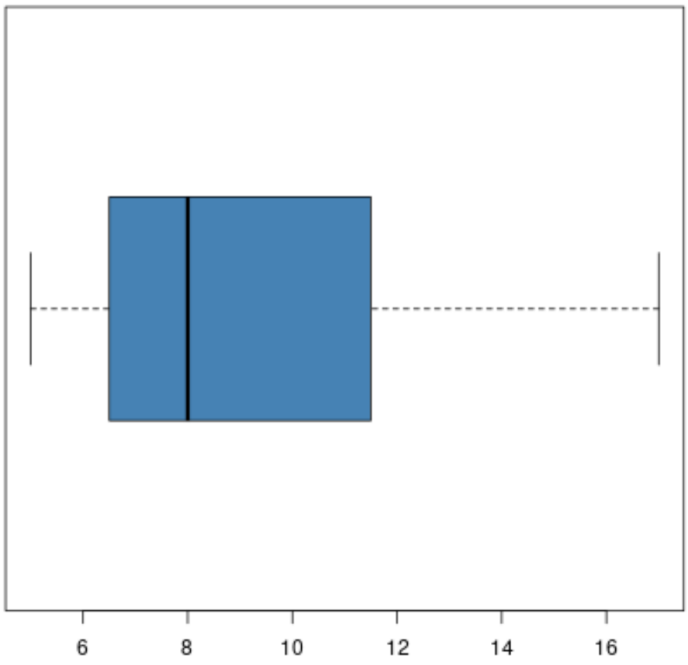
```
#create one horizontal boxplot
ggplot(df, aes(y=values)) +
geom_boxplot() +
coord_flip()
#create several horizontal boxplots by group
ggplot(df, aes(x=group, y=values)) + geom_boxplot() +
coord_flip()
```

The following examples show how to create horizontal boxplots in both base R and ggplot2.

Example 1: Horizontal Boxplots in Base R

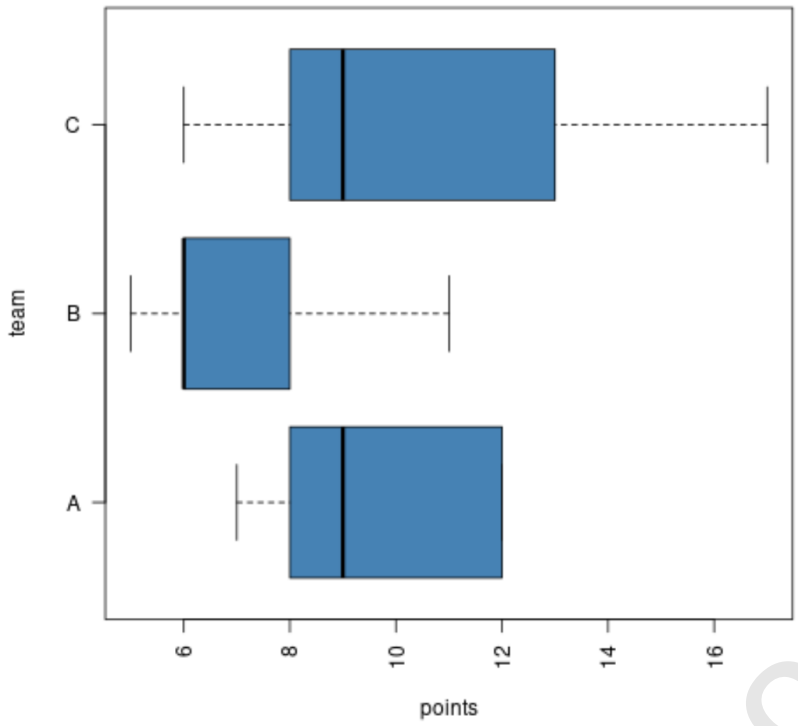
The following code shows how to create a horizontal boxplot for one variable in a data frame in R:

```
#create data
df <- data.frame(points=c(7, 8, 9, 12, 12, 5, 6, 6, 8, 11, 6,
8, 9, 13, 17),
team=rep(c('A', 'B', 'C'), each=5))

#create horizontal boxplot for points
boxplot(df$points, horizontal=TRUE, col='steelblue')
```



The following code shows how to create several horizontal boxplots based on groups:

```
#create data
df <- data.frame(points=c(7, 8, 9, 12, 12, 5, 6, 6, 8, 11, 6, 8, 9, 13, 17),
team=rep(c('A', 'B', 'C'), each=5))

#create horizontal boxplots grouped by team
boxplot(points~team, data=df, horizontal=TRUE, col='steelblue', las=2)
```



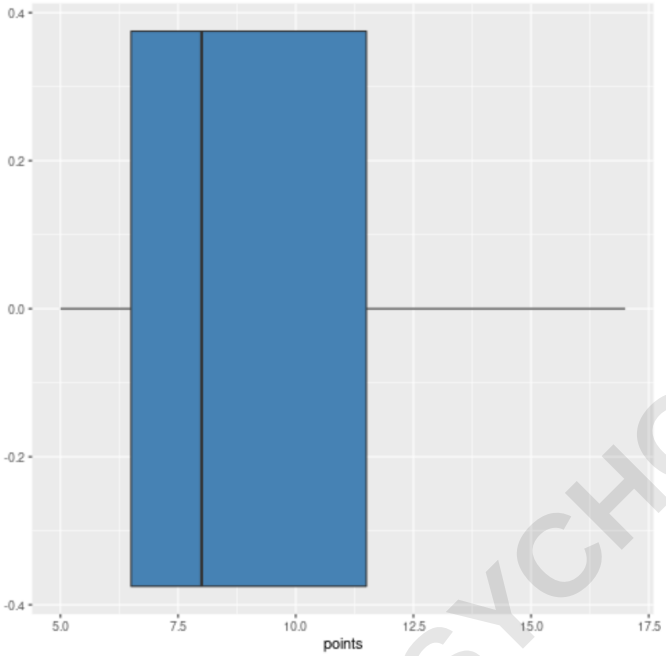
Note that the argument las=2 tells R to make the y-axis labels perpendicular to the axis.

Example 2: Horizontal Boxplots in ggplot2

The following code shows how to create a horizontal boxplot for one variable in ggplot2:

```
library(ggplot2)

#create data
df <- data.frame(points=c(7, 8, 9, 12, 12, 5, 6, 6, 8, 11, 6, 8, 9, 13, 17),
team=rep(c('A', 'B', 'C'), each=5))
```

```
#create horizontal boxplot for points
ggplot(df, aes(y=points)) +
geom_boxplot(fill='steelblue') +
coord_flip()
```



The following code shows how to create several horizontal boxplots in ggplot2 based on groups:

```
library(ggplot2)

#create data
df <- data.frame(points=c(7, 8, 9, 12, 12, 5, 6, 6, 8, 11, 6, 8, 9, 13, 17),
team=rep(c('A', 'B', 'C'), each=5))
```

```
#create horizontal boxplot for points
ggplot(df, aes(x=team, y=points)) +
geom_boxplot(fill='steelblue') +
coord_flip()
```