

# How can I display the mean value on a boxplot using Seaborn?

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June 25, 2024

## RECOMMENDED CITATION

stats writer (2024). *How can I display the mean value on a boxplot using Seaborn?*. PSYCHOLOGICAL SCALES. Retrieved from <https://scales.arabpsychology.com/?p=151542>

Seaborn is a data visualization library in Python that allows users to create informative and visually appealing plots. One of its features is the ability to display the mean value on a boxplot. A boxplot is a graphical representation of numerical data through quartiles, median, and outliers. To display the mean value on a boxplot using Seaborn, the user can use the "showmeans" parameter in the boxplot function. This will add a marker or line at the mean value of the data, providing additional insight and understanding of the data distribution. By incorporating the mean value into a boxplot, it becomes a more comprehensive and informative visualization tool for data analysis.

## Seaborn: Display Mean Value on Boxplot

You can use the `showmeans` argument to display the mean value in boxplots created using seaborn:

```
sns.boxplot(data=df, x='x_var', y='y_var',  
showmeans=True)
```

The following example shows how to use this syntax in practice.

**Example: Display Mean Value on Seaborn Boxplot**

Suppose we have the following pandas DataFrame that shows the points scored by basketball players on three different teams:

```
import pandas as pd
```

```
#create DataFrame
```

```
df = pd.DataFrame({'team': ,
```

```
'points': })
```

```
#view head of DataFrame
```

```
print(df.head())
```

```
team points
```

```
0 A 3
```

```
1 A 4
```

```
2 A 6
```

```
3 A 8
```

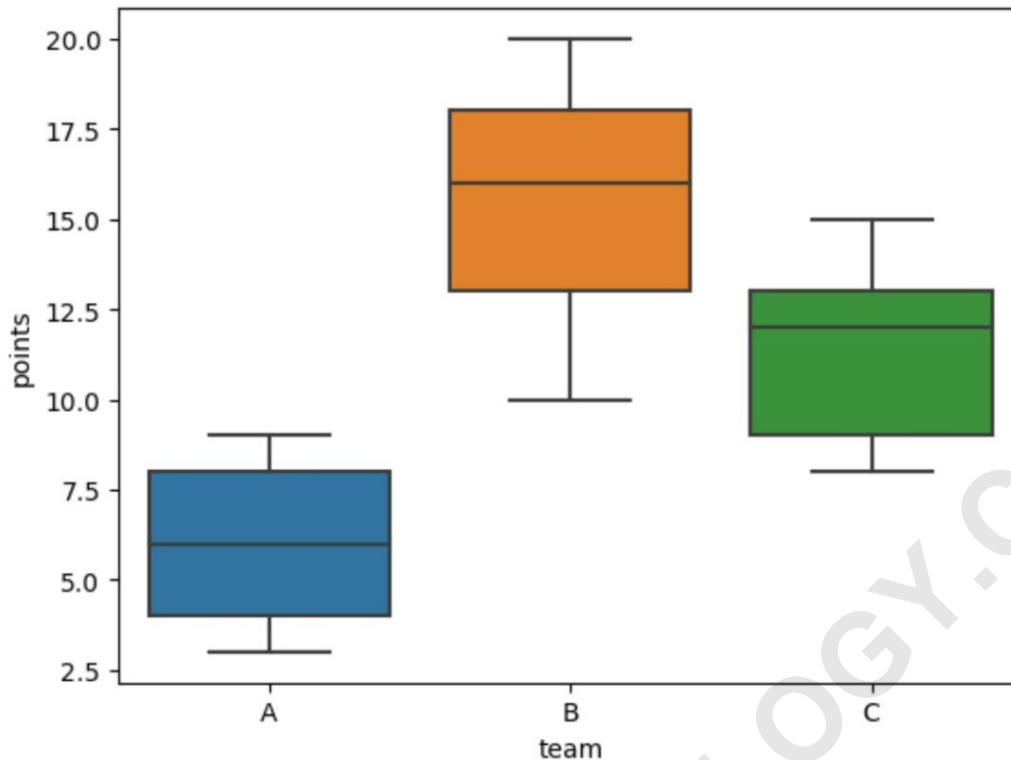
```
4 A 9
```

We can use the following code to create boxplots to visualize the distribution of points for each team:

```
import seaborn as sns
```

```
#create boxplot to visualize points distribution by team
```

```
sns.boxplot(data=df, x='team', y='points')
```



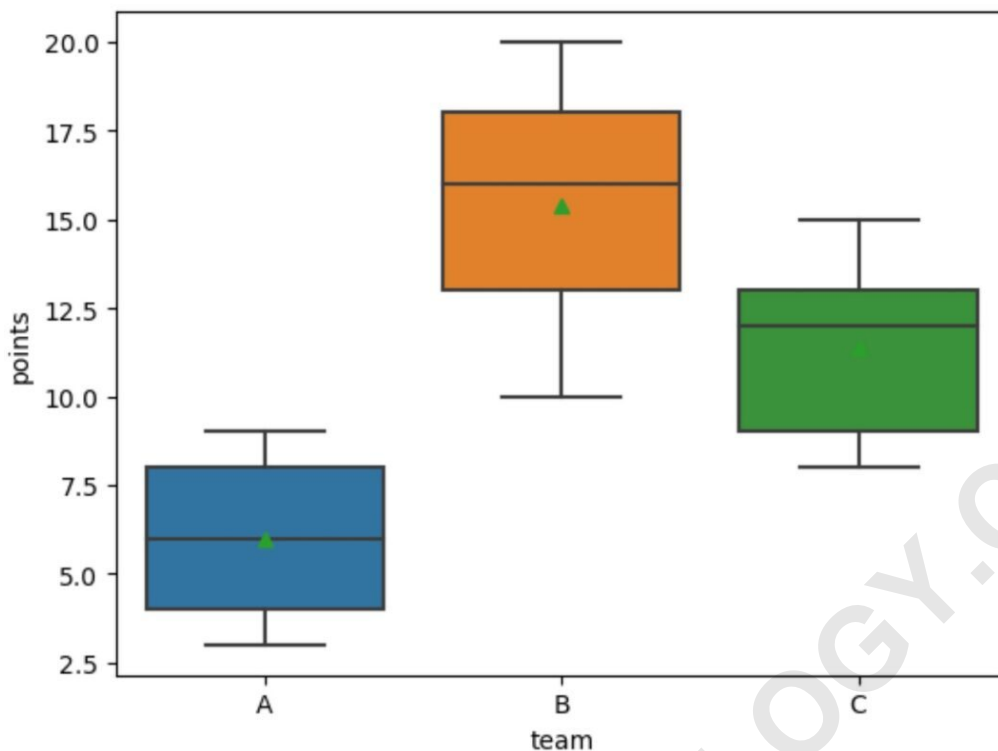
By default, the boxplots display the median value using a horizontal line inside each boxplot.

To display the mean value for each boxplot, you must specify `showmeans=True`:

```
import seaborn as sns
```

```
#create boxplot to visualize points distribution by team  
(and display mean values)
```

```
sns.boxplot(data=df, x='team', y='points',  
showmeans=True)
```



By default, seaborn uses green triangles to display the mean value for each boxplot.

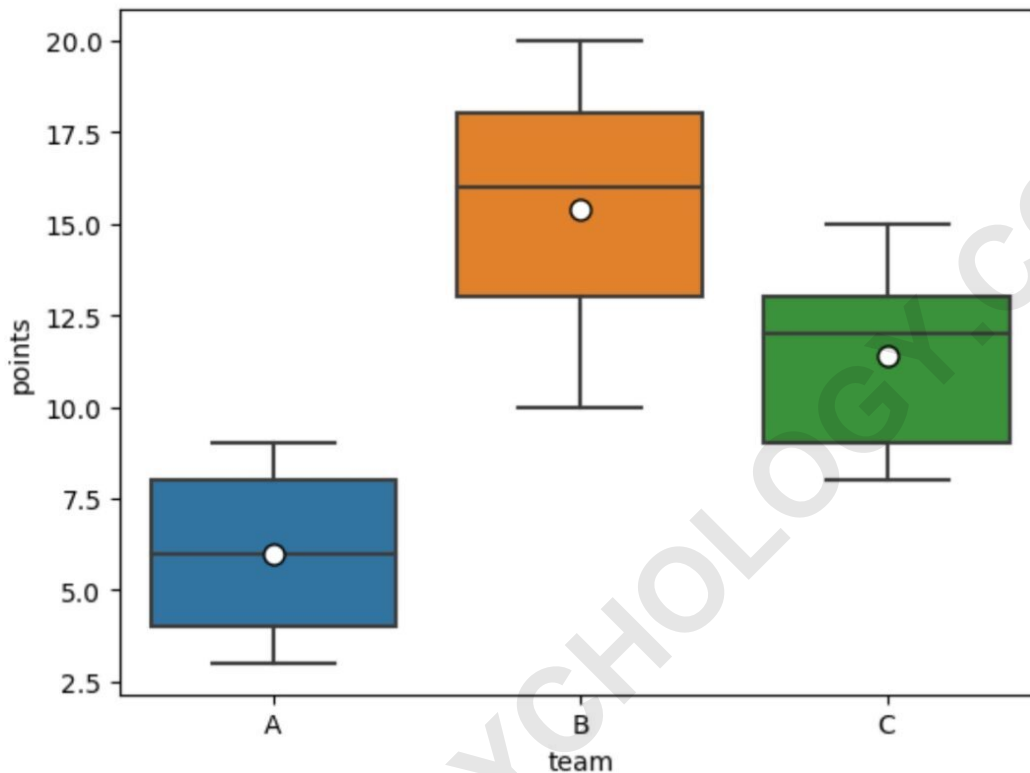
To customize the appearance of the mean value, feel free to use the `meanprops` argument:

```
import seaborn as sns
```

```
#create boxplot to visualize points distribution by team
```

```
sns.boxplot(data=df, x='team', y='points',  
            showmeans=True,  
            meanprops={'marker':'o',  
                       'markerfacecolor':'white',
```

```
'markeredgecolor':'black',  
'markersize':'8'})
```



Feel free to play around with the values in the `meanprops` argument to modify the appearance of the mean values in the boxplots.

**Note:** You can find the complete documentation for the `seaborn boxplot()` function .

The following tutorials explain how to perform other common functions in seaborn: