

How to Plot Categorical Data in Pandas (With Examples)

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Plotting categorical data in Pandas can be done using the 'plot' method, which allows you to plot data points on a graph. To plot categorical data in Pandas, you need to use the `plot.bar()` method, which will create a bar chart for each category in the data set. You can also use the `plot.box()` method to create a box plot of the data. Both methods allow you to customize the graph by adding labels, titles, and other features. These methods are useful for understanding the distribution of the data and can be used to identify patterns and trends.

There are three common ways to visualize :

Bar Charts

Boxplots by Group

Mosaic Plots

The following examples show how to create each of these plots for a pandas DataFrame in Python.

Example 1: Bar Charts

The following code shows how to create a bar chart to visualize the frequency of teams in a certain pandas DataFrame:

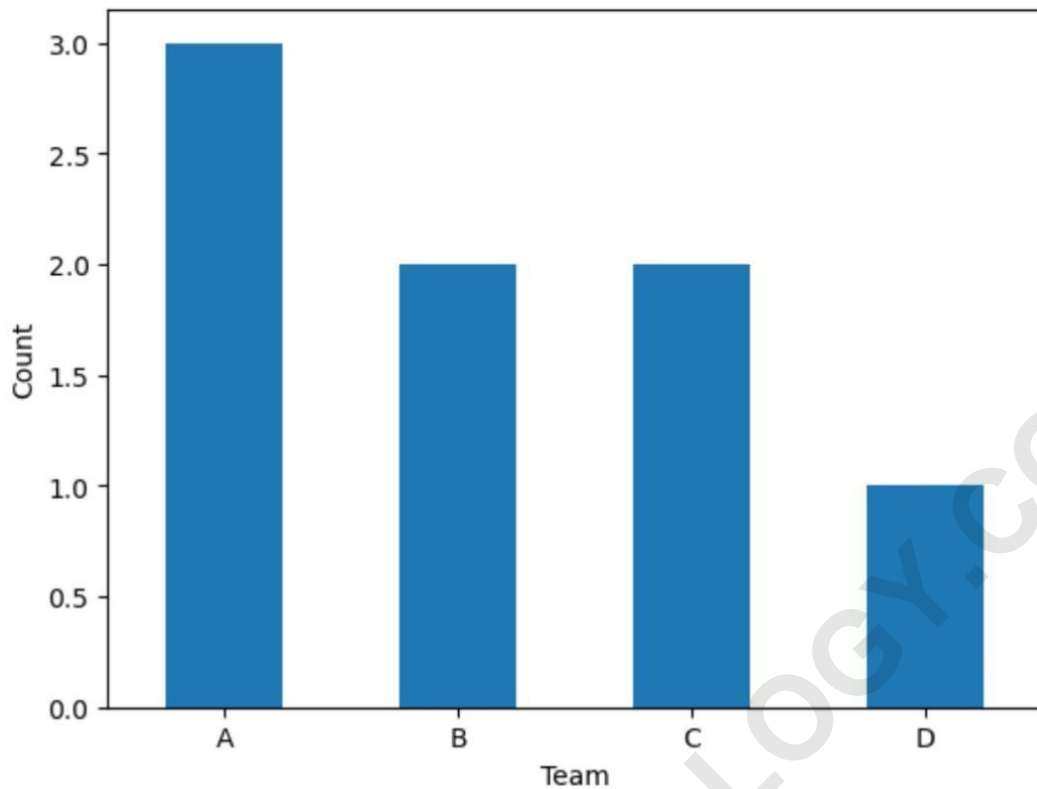
```
import pandas as pd
```

```
#create DataFrame
```

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

```
#create bar plot to visualize frequency of each team
```

```
df.value_counts().plot(kind='bar', xlabel='Team', ylabel='Count', rot=0)
```



The x-axis displays each team name and the y-axis shows the frequency of each team in the DataFrame.

Note: The argument `rot=0` tells pandas to rotate the x-axis labels to be parallel to the x-axis.

Example 2: Boxplots by Group

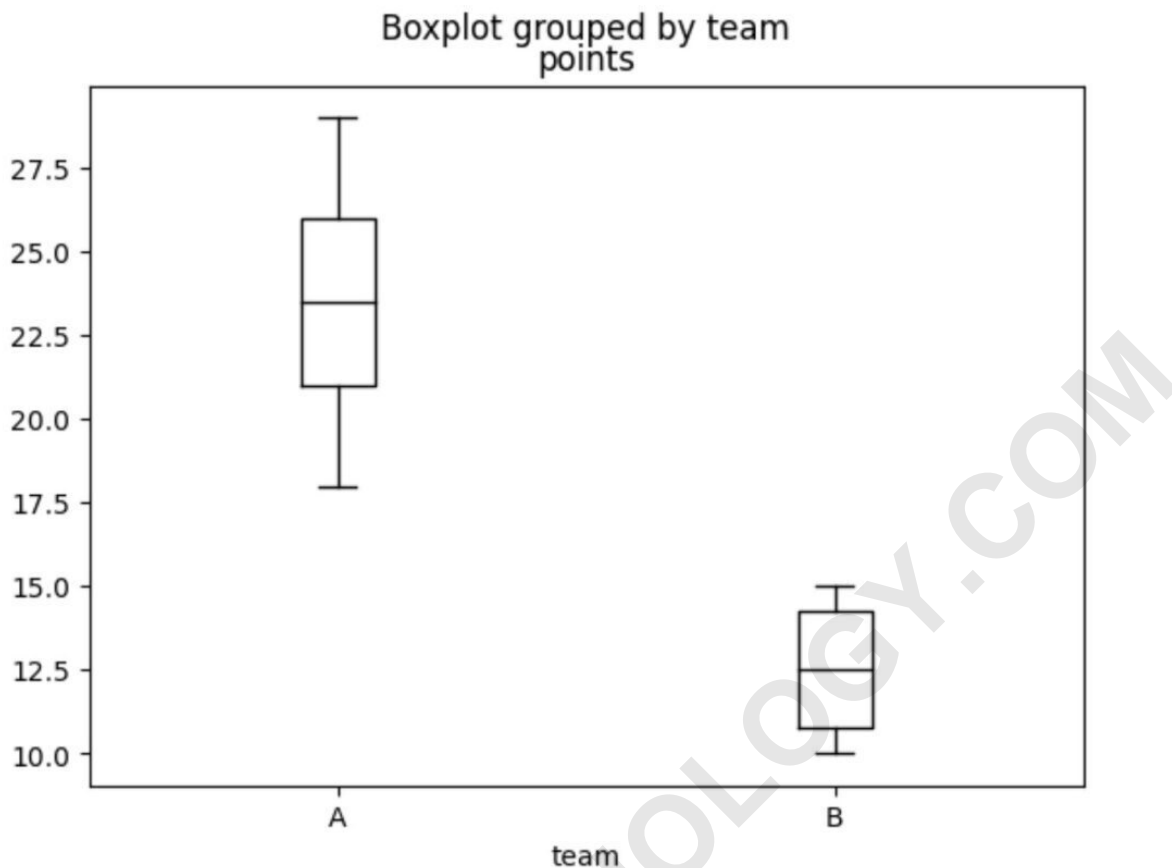
Grouped boxplots are a useful way to visualize a numeric variable, grouped by a categorical variable.

For example, the following code shows how to create boxplots that show the distribution of points scored, grouped by team:

```
import pandas as pd
```

```
#create DataFrame  
df = pd.DataFrame({'team': ,  
'points': })
```

```
#create boxplot of points, grouped by team  
df.boxplot(column=, by='team', grid=False, color='black')
```



The x-axis displays the teams and the y-axis displays the distribution of points scored by each team.

Example 3: Mosaic Plot

A mosaic plot is a type of plot that displays the frequencies of two different categorical variables in one plot.

```
import pandas as pd
from statsmodels.graphics.mosaicplot import mosaic
```

```
#create DataFrame
df = pd.DataFrame({'team': ,
'result': })
```

```
#create mosaic plot
mosaic(df, );
```



The x-axis displays the teams and the y-axis displays the frequency of results for each team.

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