# How to Easily Create a Scatter Plot from Multiple Columns in Pandas

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To create a scatter plot using multiple columns in Pandas, you will need to use the DataFrame.plot.scatter() method. This method takes two parameters: x and y, which are the names of the columns that will be used to create the scatter plot. The x and y parameters should be strings that represent the column names. You can also customize the plot by adding other parameters such as color, size, and markers. Once the plot is created, you can save it as an image or display it directly in the notebook.

You can use the following basic syntax to create a scatter plot using multiple columns in a pandas DataFrame:

**import pandas as pd**

#create scatter plot of A vs. B
ax1 = df.plot(kind='scatter', x='A', y='B', color='r')

#add scatter plot on same graph of C vs. D
ax2 = df.plot(kind='scatter', x='C', y='D', color='g', ax=ax1)

This particular example creates a scatter plot using columns A and B, then overlays another scatter plot on the same graph using columns C and D.

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

## Example: Create Pandas Scatter Plot Using Multiple Columns

Suppose we have the following pandas DataFrame that shows the points and assists for various basketball players on teams A and B:

**import pandas as pd**

#create DataFrame
df = pd.DataFrame({'A_assists': ,
'A_points': ,
'B_assists': ,
'B_points': })
#view DataFrame
print(df)

A_assists A_points B_assists B_points
0 3 6 3 7
1 4 8 4 9

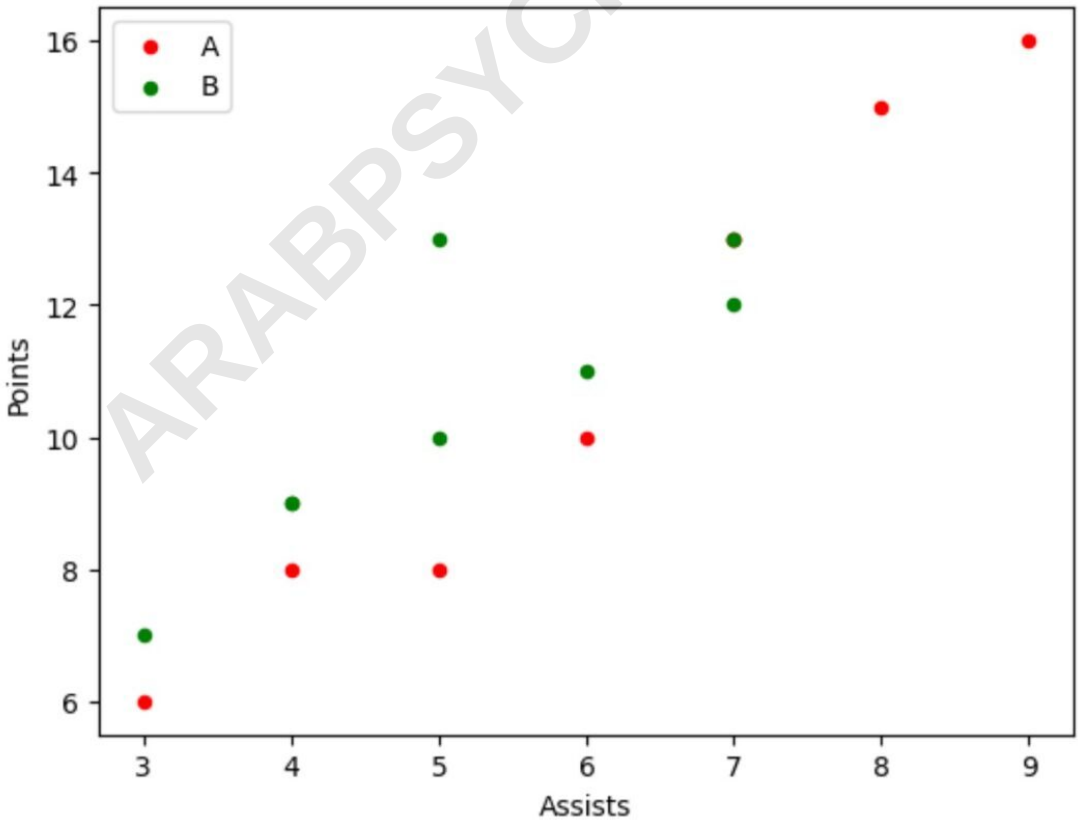
2 5 8 4 9
3 6 10 5 13
4 7 13 5 10
5 7 13 6 11
6 8 15 7 12
7 9 16 7 13

We can use the following syntax to create a scatter plot using columns **A_assists** and **A_points**, then overlay another scatter plot on the same graph using columns **B_assists** and **B_points**:

**#create scatter plot of A_assists vs. A_points**
**ax1=df.plot(kind='scatter', x='A_assists', y='A_points', color='r', label='A')**

#add scatter plot on same graph using B_assists vs. B_points
ax2=df.plot(kind='scatter', x='B_assists', y='B_points', color='g', label='B', ax=ax1)

#specify x-axis and y-axis labels
ax1.set_xlabel('Assists')
ax1.set_ylabel('Points')



The end result is a scatter plot that contains the values in the columns **A_assists** and **A_points** in red and the values in the columns **B_assists** and **B_points** in green.

**Note #1**: The label argument specifies the label to use in the legend of the plot.

**Note #2**: In this example, we used two groups of columns to plot two scatter plots on the same graph. However, you could use **ax3**, **ax4**, etc. to add as many columns as you'd like to the scatter plot.