How can I use the index in Pandas plot and what are some examples of its application?”

Authored by

stats writer

June 26, 2024

The index in Pandas plot refers to the labels or values assigned to the data points in a plot. It is a powerful tool that allows for easy manipulation and analysis of data. Using the index, one can easily plot different subsets of data, such as specific columns or rows, or apply mathematical operations to the data. For example, the index can be used to plot a time series data, where the index represents the date or time, making it easier to visualize trends and patterns. Additionally, the index can be used to filter and group data, allowing for more precise analysis. Overall, the index in Pandas plot is a valuable feature that enhances the functionality and versatility of data visualization and analysis.

Use Index in Pandas Plot (With Examples)

You can use one of the following methods to use the values in the index of a pandas DataFrame as the x-axis values in a plot:

Method 1: Use plot()

df.plot(y='my_column')

If you don't specify a variable to use for the x-axis then pandas will use the index values by default.

Method 2: Use plot() with use_index=True

df.plot(y='my_column', use_index=True)

The use_index=True argument explicitly tells pandas to use the index values for the x-axis.

Both of these methods will produce the same result.

The following examples show how to use each method in practice with the following pandas DataFrame:

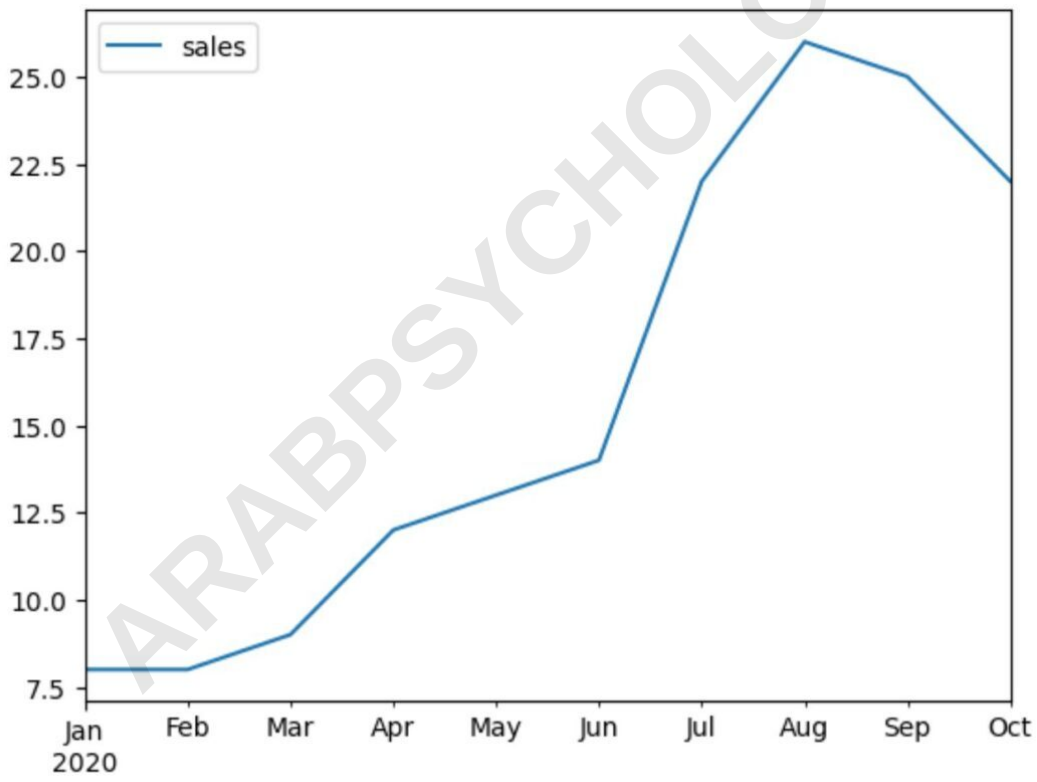
```
import pandas as pd

#create DatFrame
df = pd.DataFrame({'sales': },
index=pd.date_range('1/1/2020', periods=10, freq='m'))

#view DataFrame
print(df)
```

```
sales
2020-01-31 8
2020-02-29 8
2020-03-31 9
2020-04-30 12
2020-05-31 13
2020-06-30 14
2020-07-31 22
2020-08-31 26
2020-09-30 25
2020-10-31 22
```

Example 1: Use plot()

The following code shows how to use the plot() function in pandas to create a line chart that uses the index values in the DataFrame as the x-axis and the values in the sales column as the y-axis values:

```
#create line chart and use index values as x-axis values
df.plot(y='sales')
```



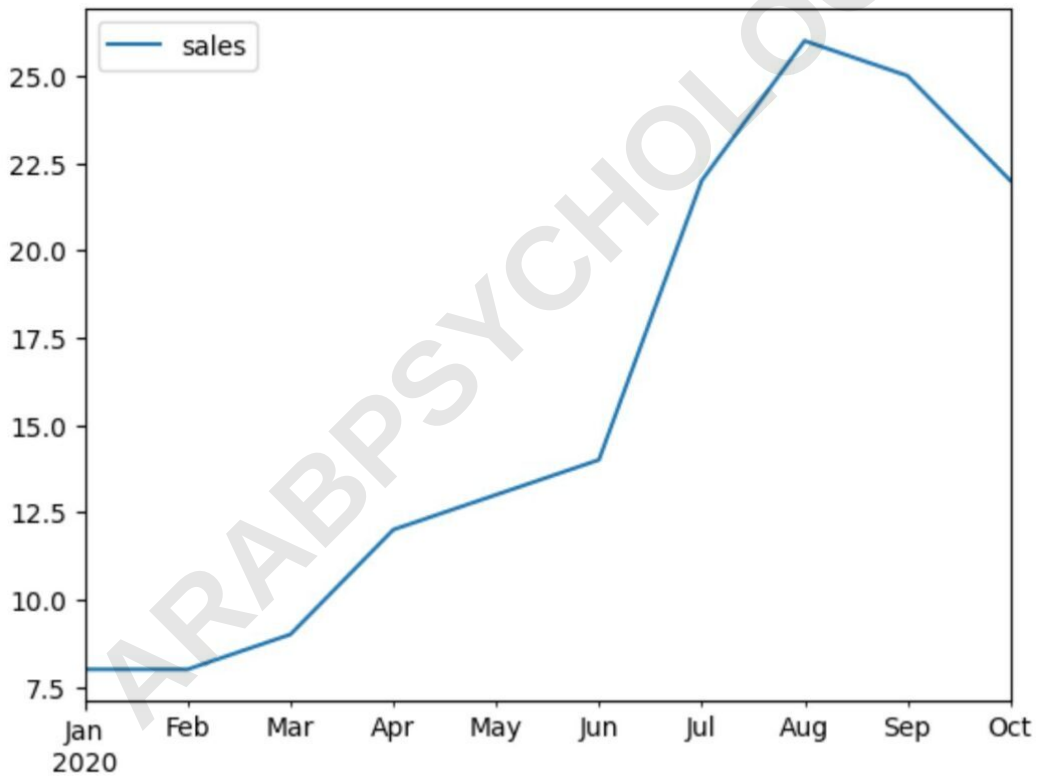
Notice that the plot automatically uses the dates in the index of the DataFrame as the values on the x-axis of

the line chart.

Since we didn't specify a variable to use on the x-axis, pandas used the index values by default.

Example 2: Use plot() with use_index=True

```
#create line chart and use index values as x-axis values
df.plot(y='sales', use_index=True)
```



Once again the plot uses the dates in the index of the DataFrame as the values on the x-axis of the line chart.

Notice that this chart matches the previous chart.

The following tutorials explain how to perform other common tasks in pandas: