

How can I add subtotals to a pivot table in Pandas?

Authored by
stats writer

June 27, 2024

RECOMMENDED CITATION

stats writer (2024). *How can I add subtotals to a pivot table in Pandas?*. PSYCHOLOGICAL SCALES. Retrieved from <https://scales.arabpsychology.com/?p=155682>

Adding subtotals to a pivot table in Pandas is a simple process that allows for better organization and analysis of data. By using the "aggfunc" parameter in the pivot_table function, one can specify the type of subtotals they want to include, such as sum, mean, or count. The "margins" parameter can also be used to add a row and column for overall totals. This feature is useful for summarizing and comparing data in a pivot table, making it easier to understand and draw insights from the data set.

Pandas: Add Subtotals to Pivot Table

Often you may want to add subtotals to a pandas pivot table.

Fortunately this is easy to do using built-in functions in pandas.

The following example shows how to do so.

Example: Add Subtotals to Pandas Pivot Table

Suppose we have the following pandas DataFrame that contains information about various basketball players:

```
import pandas as pd  
  
#create DataFrame  
df = pd.DataFrame({'team': ,  
'position': ,  
'all_star': ,
```

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

```
#view DataFrame
```

```
print(df)
```

```
team position all_star points
```

```
0 A G Y 4
```

```
1 A G N 4
```

```
2 A F Y 6
```

```
3 A F Y 8
```

```
4 B G N 9
```

```
5 B F N 5
```

```
6 B F N 5
```

```
7 B F Y 12
```

We can use the following code to create a pivot table in pandas that shows the sum of points for each combination of team, all_star, and position in the DataFrame:

```
#create pivot table
```

```
my_table = pd.pivot_table(df, values='points',
```

```
index=,
```

```
columns='position',
```

```
aggfunc='sum')
```

```
#view pivot table
```

```
print(my_table)
```

```
position F G
```

```
team all_star
```

```
A N NaN 4.0
```

```
Y 14.0 4.0
```

```
B N 10.0 9.0
```

```
Y 12.0 NaN
```

Now suppose we would like to add a subtotals row that shows the subtotal of points for each team and position.

We can use the following syntax to do so:

```
#add subtotals row to pivot table
```

```
pd.concat().append(my_table.sum()).rename(('Grand',  
'Total'))
```

```
position F G
```

```
team all_star
```

```
A N NaN 4.0
```

Y 7.0 4.0

Total 7.0 8.0

B N 5.0 9.0

Y 12.0 NaN

Total 17.0 9.0

Grand Total 24.0 17.0

We now have two subtotal rows that show the subtotal of points for each team and position, along with a grand total row that shows the grand total of each column.

Note: You can find the complete documentation for the pandas `pivot_table()` function .

Additional Resources

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