

How can I use Pandas to find the minimum value by group in a dataset?

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Pandas is a popular data analysis library in Python that allows users to manipulate and analyze large datasets efficiently. One of its useful functions is the ability to find the minimum value by group in a dataset. This means that you can group your data based on a specific variable, such as a category or a time period, and find the minimum value for each group. This can be achieved using the `groupby()` function in Pandas, which splits the dataset into groups and applies a function, such as `min()`, to each group. This allows for easy comparison and identification of the minimum value within each group, providing valuable insights for data analysis.

Find the Minimum Value by Group in Pandas

You can use the following methods to find the minimum value by group in a pandas DataFrame:

Method 1: Groupby minimum of one column

```
df.groupby('group_column').min()
```

Method 2: Groupby minimum of multiple columns

```
df.groupby('group_column').min()
```

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

```
import pandas as pd

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

```
'points':,  
'rebounds': })
```

```
#display DataFrame  
print(df)
```

```
team points rebounds  
0 A 24 11  
1 A 23 8  
2 B 27 7  
3 B 11 6  
4 B 14 6  
5 C 8 5  
6 C 13 12
```

Example 1: Groupby Minimum of One Column

The following code shows how to find the minimum value of the points column, grouped by the team column:

```
#find minimum value of points, grouped by team  
df.groupby('team').min()
```

```
team  
A 23
```

B 11

C 8

Name: points, dtype: int64

From the output we can see:

The minimum value of points for team A is 23. The minimum value of points for team B is 11. The minimum value of points for team C is 8.

Example 2: Groupby Minimum of Multiple Columns

The following code shows how to find the minimum value of the points and rebounds columns, grouped by the team column:

#find minimum value of points and rebounds, grouped by team

```
df.groupby('team').min()
```

```
points rebounds
```

```
team
```

```
A 23 8
```

```
B 11 6
```

```
C 8 5
```

From the output we can see:

Team A:

Minimum points: 23 Minimum rebounds: 8

Team B:

Minimum points: 11 Minimum rebounds: 6

Team C:

Minimum points: 8 Minimum rebounds: 5

Note: It's important that you use double brackets when specifying the value columns, otherwise you may receive an error.

Additional Resources

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

[How to Calculate the Sum of Columns in Pandas](#)

[How to Calculate the Mean of Columns in Pandas](#)

[How to Find the Max Value of Columns in Pandas](#)