How can I use Pandas to obtain the frequency counts of values in a specific column?

Authored by

stats writer

June 26, 2024

Pandas is a popular Python library used for data manipulation and analysis. It provides a powerful tool for obtaining frequency counts of values in a specific column of a dataset. By using the built-in functions and methods of Pandas, users can easily extract and organize the data in a desired format. To obtain frequency counts of values in a specific column, users can use the "value_counts()" method, which returns a series containing the frequency counts of unique values in the column. This allows for efficient and accurate analysis of data, providing valuable insights into the distribution of values within a dataset. Additionally, Pandas offers various options for customization, making it a versatile tool for data exploration and visualization. Overall, Pandas is a valuable resource for obtaining frequency counts of values in a specific column, providing a convenient and effective solution for data analysis tasks.

Pandas: Get Frequency Counts of Values in Column

You can use the following methods to get frequency counts of values in a column of a pandas DataFrame:

Method 1: Get Frequency Count of Values in Table Format

df.value_counts()

Method 2: Get Frequency Count of Values in Dictionary Format

df.value_counts().to_dict()

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

```
import pandas as pd

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

#view DataFrame
print(df)

team points
0 A 12
1 A 20
2 A 25
3 A 8
4 B 12
5 B 19
6 B 27
7 C 35
```


Example 1: Get Frequency Count of Values in Table Format

We can use the value_counts() function to get a frequency count of each unique value in the team column of the DataFrame and display the results in a table format:

#get frequency count of values in 'team' column
df.value_counts()

A 4
B 3
C 1
Name: team, dtype: int64

From the results we can see:

The value 'A' occurs 4 times in the team column.The value 'B' occurs 3 times in the team column.The value 'C' occurs 1 time in the team column.

Notice that the results are displayed in a table format.

Example 2: Get Frequency Count of Values in Dictionary Format

We can use the value_counts() function and the to_dict() function to get a frequency count of each unique value in the team column of the DataFrame and display the results in a dictionary format:

#get frequency count of values in 'team' column and display in dictionary
df.value_counts().to_dict()

{'A': 4, 'B': 3, 'C': 1}

The frequency counts of each unique value in the team column are shown in a dictionary format.

The value 'A' occurs 4 times in the team column.The value 'B' occurs 3 times in the team column.The value 'C' occurs 1 time in the team column.

This matches the frequency counts in the previous method.

The results are simply shown in a different format.

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