

How can I iterate over columns in a Pandas DataFrame?

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May 3, 2024

RECOMMENDED CITATION

stats writer (2024). *How can I iterate over columns in a Pandas DataFrame?*.

PSYCHOLOGICAL SCALES. Retrieved from <https://scales.arabpsychology.com/?p=142307>

Iterating over columns in a Pandas DataFrame refers to the process of accessing and looping through each column within a DataFrame object. This allows for the manipulation and analysis of the data contained within each column. This can be achieved by using techniques such as for loops, list comprehension, or the built-in `iteritems()` method. By iterating over columns, one can efficiently perform tasks such as data cleaning, data visualization, and statistical analysis on a DataFrame in a systematic manner.

Iterate Over Columns in Pandas DataFrame

You can use the following basic syntax to iterate over columns in a pandas DataFrame:

```
for name, values in df.iteritems():  
    print(values)
```

The following examples show how to use this syntax in practice with the following pandas DataFrame:

```
import pandas as pd  
  
#create DataFrame  
df = pd.DataFrame({'points': ,  
                  'assists': ,  
                  'rebounds': })  
  
#view DataFrame  
df
```

points assists rebounds

0 25 5 11

1 12 7 8

2 15 7 10

3 14 9 6

4 19 12 6

Example 1: Iterate Over All Columns in DataFrame

The following code shows how to iterate over every column in a pandas DataFrame:

```
for name, values in df.iteritems():  
    print(values)
```

0 25

1 12

2 15

3 14

4 19

Name: points, dtype: int64

0 5

1 7

2 7

3 9

4 12

Name: assists, dtype: int64

0 11

1 8

2 10

3 6

4 6

Name: rebounds, dtype: int64

We can also use the following syntax to iterate over every column and print just the column names:

```
for name, values in df.iteritems():  
    print(name)
```

points

assists

rebounds

Example 2: Iterate Over Specific Columns

The following syntax shows how to iterate over specific columns in a pandas DataFrame:

```
for name, values in df].iteritems():
```

```
print(values)
```

```
0 25
```

```
1 12
```

```
2 15
```

```
3 14
```

```
4 19
```

```
Name: points, dtype: int64
```

```
0 11
```

```
1 8
```

```
2 10
```

```
3 6
```

```
4 6
```

```
Name: rebounds, dtype: int64
```

We can also use the following syntax to iterate over a range of specific columns:

```
for name, values in df.iloc.iteritems():
```

```
print(values)
```

```
0 25
```

```
1 12
```

```
2 15
```

```
3 14
```

4 19

Name: points, dtype: int64

0 5

1 7

2 7

3 9

4 12

Name: assists, dtype: int64

You can find the complete documentation for the `iteritems()` function .

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