

How can an empty column be added to a Pandas DataFrame?

Authored by
stats writer

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To add an empty column to a Pandas DataFrame, you can use the "df = np.nan" command. This will create a new column with the specified name and fill it with empty values represented by "np.nan". This can be useful for adding a new column to a DataFrame before filling it with data, or for creating a placeholder column for future data.

Add an Empty Column to a Pandas DataFrame

Occasionally you may want to add an empty column to a pandas DataFrame.

Fortunately this is fairly easy to do and this tutorial shows several examples of how to do so using the following pandas DataFrame:

```
import numpy as np
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: Add an Empty Column Using ""

The first way to add an empty column is to use quotations as follows:

```
#add new column titled 'steals'
df = ""
```

```
#view DataFrame
df
```

```
points assists rebounds steals
0 25 5 11
1 12 7 8
2 15 7 10
3 14 9 6
4 19 12 6
```

Example 2: Add an Empty Column Using Numpy

Another way to add an empty column is to use np.nan

as follows:

```
#add new column titled 'steals'
```

```
df = np.nan
```

```
#view DataFrame
```

```
df
```

```
points assists rebounds steals
```

```
0 25 5 11 NaN
```

```
1 12 7 8 NaN
```

```
2 15 7 10 NaN
```

```
3 14 9 6 NaN
```

```
4 19 12 6 NaN
```

Example 3: Add an Empty Column Using Pandas Series

Another way to add an empty column is to use pd.Series() as follows:

```
#add new column titled 'steals'
```

```
df = pd.Series()
```

```
#view DataFrame
```

```
df
```

points assists rebounds steals

0 25 5 11 NaN

1 12 7 8 NaN

2 15 7 10 NaN

3 14 9 6 NaN

4 19 12 6 NaN

Example 4: Add an Empty Column Using Pandas Insert

Another way to add an empty column is to use the insert() function as follows:

```
#create DataFrame
```

```
df = pd.DataFrame({'points': ,  
'assists': ,  
'rebounds': })
```

```
#insert empty column titled 'steals' into index position 2  
df.insert(2, "steals", np.nan)
```

```
#view DataFrame
```

```
df
```

points assists steals rebounds

0 25 5 NaN 11

1 12 7 NaN 8

2 15 7 NaN 10

3 14 9 NaN 6

4 19 12 NaN 6

The nice part about this approach is that you can insert the empty column into any position you'd like in the DataFrame.

Example 5: Add Multiple Empty Columns at Once

```
#create DataFrame
```

```
df = pd.DataFrame({'points': ,
```

```
'assists': ,
```

```
'rebounds': })#add empty columns titled 'empty1' and
```

```
'empty2'df = df.reindex(columns = df.columns.tolist() +
```

```
)#view DataFrame
```

```
df
```

```
points assists reboundsempy1 empty2
```

```
0 25 5 11 NaN NaN
```

```
1 12 7 8 NaN NaN
```

```
2 15 7 10 NaN NaN
```

```
3 14 9 6 NaN NaN
```

```
4 19 12 6 NaN NaN
```

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