How to Easily Subtract Two Columns in a Pandas DataFrame

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Subtracting two columns in a Pandas DataFrame is easily done by subtracting the column values by using the '-' operator. For example, df = df - df would subtract the values in Column2 from the values in Column1 and store the result in a new column called New_Column. This can also be done with two existing columns by using the same syntax, df = df - df. This operation can also be applied to multiple columns simultaneously by using the '.sub()' method. For example, df.sub(df2) would subtract the values of dataframe2 from dataframe1.

You can use the following syntax to subtract one column from another in a pandas DataFrame:

#subtract column 'B' from column 'A'
df = df.A- df.B

The following examples show how to use this syntax in practice.

Example 1: Subtract Two Columns in Pandas

The following code shows how to subtract one column from another in a pandas DataFrame and assign the result to a new column:

import pandas as pd

#create DataFrame
df = pd.DataFrame({'A': ,
'B': ,
'C': })

#subtract column B from column A
df = df.A - df.B

#view DataFrame
df

A B C A-B
0 25 5 11 20
1 12 7 8 5
2 15 8 10 7
3 14 9 6 5
4 19 12 6 7
5 23 9 5 14
6 25 12 9 13

7 29 4 12 25

The new column called '**A-B**' displays the results of subtracting the values in column B from the values in column A.

Example 2: Subtract Two Columns with Missing Values

If we subtract one column from another in a pandas DataFrame and there happen to be missing values in one of the columns, the result of the subtraction will always be a missing value:

import pandas as pd
import numpy as np

#create DataFrame with some missing values
df = pd.DataFrame({'A': ,
'B': ,
'C': })

#subtract column B from column A
df = df.A - df.B

#view DataFrame
df

A B C A-B
0 25 5.0 NaN 20.0
1 12 7.0 8.0 5.0
2 15 NaN 10.0 NaN
3 14 9.0 6.0 5.0
4 19 12.0 6.0 7.0
5 23 NaN 5.0 NaN
6 25 12.0 9.0 13.0
7 29 4.0 12.0 25.0

If you'd like, you can replace all of the missing values in the dataFrame with zeros using the **df.fillna(0)** function before subtracting one column from another:

import pandas as pd
import numpy as np

```
#create DataFrame with some missing values
df = pd.DataFrame({'A': ,
'B': ,
'C': })

#replace all missing values with zeros
df = df.fillna(0)

#subtract column B from column A
df = df.A - df.B

#view DataFrame
df
A B C A-B
0 25 5.0 0.0 20.0
1 12 7.0 8.0 5.0
2 15 0.0 10.0 15.0
3 14 9.0 6.0 5.0
4 19 12.0 6.0 7.0
5 23 0.0 5.0 23.0
6 25 12.0 9.0 13.0
7 29 4.0 12.0 25.0
```