How can I combine date and time columns in Pandas?

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Combining date and time columns in Pandas can be achieved using the "to_datetime" function. This function converts the date and time columns into a single datetime column, which can then be used for further data analysis and manipulation. The "to_datetime" function also allows for customization of the date and time format, making it a versatile tool for handling temporal data in Pandas. By combining date and time columns, users can easily perform time-based calculations and comparisons, leading to more efficient and accurate data analysis.

Pandas: Combine Date and Time Columns

You can use the following syntax to combine date and time columns in a pandas DataFrame into a single column:

df = pd.to_datetime(df + ' ' + df)

Note that this syntax assumes the date and time columns are both currently strings.

If both columns aren't already strings, you can use astype(str) to convert them to strings:

df = pd.to_datetime(df.astype(str) + ' ' + df.astype(str))

The following example shows how to use this syntax in practice.

Example: Combine Date and Time Columns in Pandas

Suppose we have the following pandas DataFrame that contains a date column and a time column:

```
import pandas as pd

#create DataFrame
df = pd.DataFrame({'date': ,
'time': })

#view DataFrame
print(df)
```

```
date time
0 10-1-2023 4:15:00
1 10-4-2023 7:16:04
2 10-6-2023 9:25:00
3 10-6-2023 10:13:45
4 10-14-2023 15:30:00
5 10-15-2023 18:15:00
6 10-29-2023 23:15:00
```

Suppose we would like to create a new column called datetime that combines the values in the date and time columns.

We can use the following syntax to do so:

#create new datetime column
df = pd.to_datetime(df + ' ' + df)

#view updated DataFrameprint(df)

date time datetime
0 10-1-2023 4:15:00 2023-10-01 04:15:00
1 10-4-2023 7:16:04 2023-10-04 07:16:04
2 10-6-2023 9:25:00 2023-10-06 09:25:00
3 10-6-2023 10:13:45 2023-10-06 10:13:45
4 10-14-2023 15:30:00 2023-10-14 15:30:00

Notice that the new datetime column has successfully combined the values from the date and time columns into one column.

We can also use the dtypes function to check the data types of each column in the DataFrame:

#view data type of each column
df.dtypes

date object
time object

datetime datetime64
dtype: object

From the output we can see that the date and time columns are both objects (i.e. strings) and the new datetime column is a datetime.

Note: You can find the complete documentation for the pandas to_datetime() function .

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