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Python Pandas Tutorial

PySpan a midsa/span a mpampen/pysparkwhere() Examples

Pandas - What is DataFrame

(https://sparkbyexamples.com/tutorial/)

pandas/pandas-dataframe-

tutorial-beginners-guide/)

A NNK

Pandas - What is Series

(https://sparkbyexamples.com/author/admin/) = (https://sparkbyexamples.com/python-

(https://sparkbyexamples.com/

pandas/pandas-series-tutorial-

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(https://sparkbyexamples.com/category/pandas/)

Python

pandas-tutorial-for-beginners/)com/category/python/)

Pandas - Install on Windows (https://sparkbyexamples.com/

pandas/install-pandas-on-

windows/)

Hive (hathwas/sparaframeaunales.com/apache-

is similar to if-then/if else that is used to check the one or multiple

Pandas - Create DataFrame

pandas/pandas-create-

dataframe-with-examples/)

(https://sparkbyexamples.com/ conditions of an expression in

DataFrame and replace with another

value when the condition becomes False. By default, it replaces with

Pandas - Select Rows

(https://sparkbyexamples.com/

pandas/pandas-select-rows-byindex/)

NaN value and provides a param to

kafka-tutenlage with enyngustem value.

Pandas - Select Columns

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H2O.ai (https://sparkbyexamples.com/h2o-

pandas/pandas-select-

columns-by-name-or-index/)

Pandas - Query Rows by sparkling-water-tutorial-beginners/)

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pandas/pandas-dataframequery-examples/)

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Pandas - Get Cell Value

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pandas/pandas-get-cell-value-

from-dataframe/)

Note that where() method replaces all column values of a DataFrame row when the condition becomes

False, other rows are untouched.

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Pandas - Add New Column

pandas/pandas-add-column-to-

dataframe/)
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Syntax

<u>pandas/pandas-rename-</u> <u>column-in-dataframe/)</u>

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Pandas – Drop Columns by
Label | Index
(https://sparkbyexamples.com/
pandas/pandas-drop-columnsexamples/)

Pandas – Drop Rows Based on Column Value
(https://sparkbyexamples.com/pandas/pandas-delete-rows-based-on-column-value/)

Pandas – Cast Column Type (https://sparkbyexamples.com/ pandas/pandas-changecolumn-data-type-dttype/)

Pandas – Get Row Count (https://sparkbyexamples.com/ pandas/pandas-get-number-ofrows-examples/)

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<u>Pandas – apply() function</u> (https://sparkbyexamples.com/ pandas/pandas-apply-functionusage-examples/)</u>

Pandas – Group By Explained (https://sparkbyexamples.com/pandas/pandas-groupby-explained-with-examples/)

Pandas – Get Column Names as List (https://sparkbyexamples.com/ pandas/pandas-get-columnnames/)

Pandas - Shuffle DataFrame

examples/)

Following is the syntax of the DataFrame.where() function. This function takes parameters cond, other, inplace, axis, level, errors, try_cast. Returns DataFrame. When inplace=True used, it returns None. When a caller is Series, it returns the Series object.

DataFrame.where() syntax
DataFrame.where(cond, other=r

Parameters Explanation:

- cond Accepts one or more conditions. Takes eithere bool Series/DataFrame, array-like, or callable
- other Value to replace with.
 Takes either scalar,
 Series/DataFrame, or callable
- inplace If True, it updates the existing DataFrame and return None. Default set to False.
- axis rows/columns axis. Takes int, default None
- level Alignment leve.

Rows
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pandas/pandas-shuffle-rows-

Accepts str, {'raise', 'ignore'}, default 'raise'

<u>Pandas – Join DataFrames</u> (<u>https://sparkbyexamples.com/pandas/pandas-join-explained-with-examples/</u>)

Pandas – Merge DataFrames (https://sparkbyexamples.com/ pandas/pandas-mergedataframes-explainedexamples/)

<u>Pandas – Concat DataFrames</u> (<u>https://sparkbyexamples.com/pandas/pandas-concat-</u>dataframes-explained/)

<u>Pandas – Append DataFrames</u> (<u>https://sparkbyexamples.com/pandas/pandas-append-usage-by-examples/)</u>

<u>Pandas – Fill NaN with Value</u> (https://sparkbyexamples.com/pandas/pandas-dataframe-fill-nan-column-values/)

<u>Pandas – Drop Rows with NaN (https://sparkbyexamples.com/pandas/pandas-dropna-usage-examples/)</u>

Pandas Load & Write Files

<u>Pandas – Read JSON</u> (https://sparkbyexamples.com/ pandas/pandas-read-json-withexamples/)</u>

Pandas – Read CSV (https://sparkbyexamples.com/ pandas/pandas-read-csvexamples/)

Pandas – Write to CSV (https://sparkbyexamples.com/ pandas/pandas-writedataframe-to-csv-file/)

Pandas – Read Excel (https://sparkbyexamples.com/ pandas/pandas-read-excel try_cast - Cast teh result basck to input type. (Available since 1.3.0 version)

Let's create a DataFrame and explore the where() function usage with examples.

```
# Create DataFrame
import pandas as pd
import numpy as np
technologies= {
    'Courses':["Spark","PySpa
    'Fee' :[22000,25000,23006
    'Discount':[1500,1000,126
    'Duration':['30days','50c
    }
df = pd.DataFrame(technologie
print(df)
```

Yields below output.

```
Courses
               Fee
                    Discount D
0
            22000
                         1500
     Spark
1
   PySpark
            25000
                         1000
2
            23000
                         1200
     Spark
3
    Python
            24000
                          800
4
   PySpark
                         1300
             26000
```

2. pandas where()

Example

In pandas where() function behaves differently than SQL where clause, here it is used similar to **if then/if else**. It checks one or multiple

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Pandas - Write to Excel

(https://sparkbyexamples.com/

value when condition becomes False.

pandas/pandas-write-to-excelwith-examples/)

Pandas - Read Text (https://sparkbyexamples.com/ pandas/pandas-read-text-intodataframe/)

Pandas - Read TSV (https://sparkbyexamples.com/ pandas/pandas-read-tsv-intodataframe/)

Pandas Functions Usage

pandas - Index (https://sparkbvexamples.com/ pandas/pandas-indexexplained-with-examples/)

pandas - MultiIndex (https://sparkbyexamples.com/ pandas/pandas-multiindexdataframe-examples/)

pandas - loc[] (https://sparkbyexamples.com/ pandas/pandas-dataframe-loc/)

pandas - iloc[] (https://sparkbyexamples.com/ pandas/pandas-iloc-usagewith-examples/)

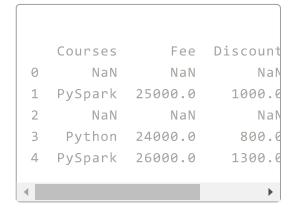
pandas - filter() (https://sparkbyexamples.com/ pandas/pandas-dataframefilter/)

pandas - where() (https://sparkbyexamples.com/ pandas/pandas-dataframewhere-examples/)

pandas - query() (https://sparkbyexamples.com/ pandas/pandas-dataframequery-examples/)

pandas - apply() (https://sparkbyexamples.com/ # Default example df2=df.where(df.Fee > 23000) print(df2)

Yields below output. Note that by defualt it replaces with numpy. NaN. You can drop rows with NaN (https://sparkbyexamples.com/panda s/pandas-drop-rows-with-nanvalues-in-dataframe/) using DataFrame.dropna() function (https://sparkbyexamples.com/panda s/pandas-dropna-usage-examples/).



3. Update with Another

Value

Now, let's update with a custom

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all rows of DataFrame with value

pandas - map()

(https://sparkbyexamples.com/

'NA' when condition Fee > 23000 becomes False.

<u>pandas/pandas-map-function-explained/)</u>

pandas = replace()
(https://sparkbyexamples.com/
pandas/pandas-replace-byexamples/)

pandas - fillna()
(https://sparkbyexamples.com/
pandas/pandas-dataframefillna-fill-nan-column-values/)

pandas - dropna()
(https://sparkbyexamples.com/
pandas/pandas-dropna-usageexamples/)

pandas - append()
(https://sparkbyexamples.com/
pandas/pandas-append-usageby-examples/)

pandas - reset_index()
(https://sparkbyexamples.com/
pandas/pandas-reset-indexexamples/)

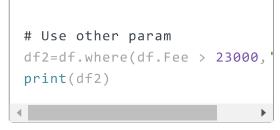
pandas - set_index()
(https://sparkbyexamples.com/
pandas/pandas-set_indexexplained-with-examples/)

pandas - sort_values()
(https://sparkbyexamples.com/
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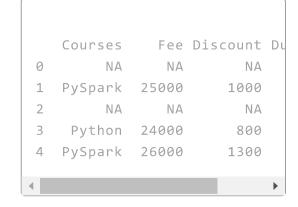
pandas - sort_index()
(https://sparkbyexamples.com/
pandas/pandas-dataframesort_index/)

pandas - drop()
(https://sparkbyexamples.com/
pandas/pandas-drop-columnsexamples/)

pandas - mean()
(https://sparkbyexamples.com/
pandas/pandas-dataframemean-examples/)



Yields below output. Notice that rows that didn't satisfy the condition are changed to 'NA'.



4. where() with Multiple Columns & Conditions

The below example demonstrates how to specify the multiple conditions by using a conditional operator.

pandas — drop_duplicates()
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drop_duplicates/)

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pandas - corr()
(https://sparkbyexamples.com/
pandas/pandas-correlation-ofcolumns/)

pandas = mean()
(https://sparkbyexamples.com/
pandas/pandas-dataframemean-examples/)

pandas - groupby()
(https://sparkbyexamples.com/
pandas/pandas-groupbyexplained-with-examples/)

pandas = isin()
(https://sparkbyexamples.com/
pandas/pandas-isin-explainedwith-examples/)

pandas - astype()
(https://sparkbyexamples.com/
pandas/pandas-dataframeastype-examples/)

pandas - to_datetime()
(https://sparkbyexamples.com/
pandas/pandas-to_datetimeexamples/)

pandas - head() - Returns Top
N Rows
(https://sparkbyexamples.com/
pandas/pandas-head-returnstop-n-rows/)

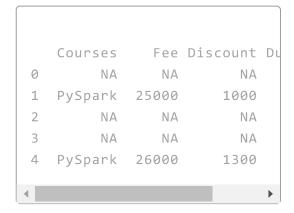
Pandas Most Used Examples

Pandas – Create DataFrame
From Dict (Dictionary)
(https://sparkbyexamples.com/
pandas/pandas-createdataframe-from-dictdictionary/)

Pandas – Replace NaN with

```
# Where on multiple columns 8
cond1 = df.Fee > 23000
cond2 = df.Discount > 900
df2 = df.where(cond1 & cond2,
print(df2)
```

Yields below output.



5. Update on Existing

DataFrame

All the above examples return a new DataFrame object instead of updating the existing one. In order to update in place use inplace=True param. When used this param with the value true, where() function returns None.

```
# Updating on existing DataFr
df.where(cond1 & cond2, 'NA',
print(df)
```

This updates the existing DataFrame object. Yields same output as above.

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Pandas – Replace NaN Values with Zero in a Column (https://sparkbyexamples.com/ pandas/pandas-replace-nanvalues-by-zero-in-a-column/)

Pandas – Change Column

Data Type On DataFrame
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Pandas – Select Rows Based on Column Values (https://sparkbyexamples.com/ pandas/pandas-selectdataframe-rows-based-oncolumn-values/)

Pandas – Delete Rows Based on Column Value (https://sparkbyexamples.com/ pandas/pandas-delete-rowsbased-on-column-value/)

Pandas – How to Change
Position of a Column
(https://sparkbyexamples.com/
pandas/pandas-changeposition-of-a-column/)

Pandas – Append a List as a Row to DataFrame (https://sparkbyexamples.com/ pandas/pandas-append-list-asa-row-to-dataframe/)

Pandas – Filter by Column
Value
(https://sparkbyexamples.com/
pandas/pandas-filter-bycolumn-value/)

Pandas – Convert Single or All Columns To String Type? (https://sparkbyexamples.com/ pandas/pandas-convertcolumns-to-string-type/)

Pandas Get Count of Each
Row of DataFrame
(https://sparkbyexamples.com/

<u>pandas/pandas-get-count-</u> <u>eaiអ្នកស្នងតែការាស្គ្រ់ទេស</u>ក្បាis site uses cookies To find out more, including how to control

Pandas – Difference Between loc and iloc in DataFrame (https://sparkbyexamples.com/

In this article, you have learned the syntax of the DataFrame.where() function, explanation of the param, and how to use the function with examples. Note that this cannot be used similar to SQL where clause instead it should be used as if-then or if-else way.

References

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TAGS: <u>DATAFRAME.WHERE()</u>
(HTTPS://SPARKBYEXAMPLES.COM/TAG/DATAF
RAME-WHERE/)



<u>NNK</u>

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Pandas groupby() and sum().
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(https://sparkbyexamples.com/
pandas/pandas-groupby-sumexamples/).

Pandas – Change the Order of
DataFrame Columns
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pandas – Find Installed

Version?
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pandas/find-pandas-installedversion-and-dependenciesversion/)

<u>Upgrade Pandas Version to</u>
<u>Latest or Specific Version</u>
(https://sparkbyexamples.com/pandas/upgrade-pandas-version-to-latest-or-specific-version/)

Pandas – How to Combine Two Series into a DataFrame (https://sparkbyexamples.com/ pandas/pandas-combine-twoseries-into-dataframe/)

Pandas – Remap Values in
Column with a Dict
(https://sparkbyexamples.com/
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Pandas – Get Column Names from DataFrame (https://sparkbyexamples.com/ pandas/pandas-get-column-

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<u>Pandas – Check If DataFrame</u>

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Pandas – Select All Columns

Except One Column

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Pandas – How to Convert
Index to Column in DataFrame
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pandas/pandas-convert-indexto-column-in-dataframe/)

Pandas – How to Take
Column-Slices of DataFrame
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pandas/how-to-slice-columnsin-pandas-dataframe/)

Pandas – How to Add an

Empty Column to a DataFrame
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Pandas – How to Check If any Value is NaN in a DataFrame (https://sparkbyexamples.com/ pandas/pandas-check-if-anyvalue-is-nan-in-a-dataframe/)

Pandas – Combine Two
Columns of Text in DataFrame
(https://sparkbyexamples.com/
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with NaN Values in DataFrame
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pandas - Append Row to

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