pandas2

Friday, January 14, 2022 2:18 PM

Read lists into columns of pandas DataFrame

Asked 6 years, 10 months ago Active 2 years, 5 months ago Viewed 25k times

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I want to load lists into columns of a pandas DataFrame but cannot seem to do this simply. This is an example of what I want using `transpose()` but I would think that is unnecessary:

```
In [1]: import numpy as np
In [2]: import pandas as pd
In [3]: x = np.linspace(0,np.pi,10)
In [4]: y = np.sin(x)
In [5]: data = pd.DataFrame(data=[x,y]).transpose()
In [6]: data.columns = ['x', 'sin(x)']
In [7]: data
Out[7]:
          x        sin(x)
0  0.000000  0.000000e+00
1  0.349066  3.420201e-01
2  0.698132  6.427876e-01
3  1.047198  8.660254e-01
4  1.396263  9.848078e-01
5  1.745329  9.848078e-01
6  2.094395  8.660254e-01
7  2.443461  6.427876e-01
8  2.792527  3.420201e-01
9  3.141593  1.224647e-16

[10 rows x 2 columns]
```

Is there a way to directly load each list into a column to eliminate the transpose and insert the column labels when creating the DataFrame?

python list pandas

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Someone just recommended creating a dictionary from the data then loading that into the DataFrame like this:

```
In [8]: data = pd.DataFrame({'x': x, 'sin(x)': y})
In [9]: data
Out[9]:
          x        sin(x)
0  0.000000  0.000000e+00
1  0.349066  3.420201e-01
2  0.698132  6.427876e-01
3  1.047198  8.660254e-01
4  1.396263  9.848078e-01
5  1.745329  9.848078e-01
6  2.094395  8.660254e-01
7  2.443461  6.427876e-01
8  2.792527  3.420201e-01
9  3.141593  1.224647e-16

[10 rows x 2 columns]
```

Note than a dictionary is an unordered set of key-value pairs. If you care about the column orders, you should pass a list of the ordered key values to be used (you can also use this list to only include some of the dict entries):

```
data = pd.DataFrame({'x': x, 'sin(x)': y}, columns=['x', 'sin(x)'])
```

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edited Oct 11 '16 at 14:32

answered Mar 12 '15 at 16:07

Steven C. Howell

13.5k ● 12 ● 66 ● 81

5

Here's another 1-line solution preserving the specified order, without typing `x` and `sin(x)` twice:

```
data = pd.concat([pd.Series(x,name='x'),pd.Series(y,name='sin(x)')], axis=1)
```

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edited Aug 14 '19 at 21:59

drsealks

2,071 ● 1 ● 16 ● 30

answered Aug 14 '19 at 20:41

dabru

399 ● 3 ● 5

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