

Sathish_K_Rajendiran_Week5_Async_5.3_Stacking_and_Unstacking_Data

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Week 5 Stacking and Unstacking Data

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Task: 5.3 Stacking and Unstacking Data

Date: 7/29/2020

```
[10]: #import libraries
import os
import csv
import numpy as np
import pandas as pd

#verify current directory
os.getcwd()
```

```
[10]: '/Users/sathishrajendiran/ist652-python'
```

```
[14]: # define dictionary with Person, Age, Weight info

persondict = {'Person': ['Bob', 'Alice', 'Steve'], 'Age': ['32', '24', '64'], 'Weight':
    ↳ ['128', '86', '95']}

type(persondict) #dict

#create a dataframe from persondict dictionary
persondf = pd.DataFrame(persondict, columns=['Person', 'Age', 'Weight'])
# persondf.head()

persondf
```

```
[14]:   Person Age Weight
0    Bob   32    128
1  Alice   24     86
2  Steve   64     95
```

```
[19]: persondf.shape  #(3, 3)
persondf.dtypes
```

```
[19]: Person    object
      Age      object
      Weight   object
      dtype: object
```

```
[20]: #set Person as the index column
persondf = persondf.set_index('Person')
persondf.head()
```

```
[20]:      Age Weight
Person
Bob      32    128
Alice    24     86
Steve    64     95
```

```
[36]: #stack the dataframe - converting columns to rows
resultdf = persondf.stack()
resultdf.shape
resultdf.index
resultdf
```

```
[36]: Person
Bob      Age      32
        Weight  128
Alice    Age      24
        Weight   86
Steve    Age      64
        Weight   95
dtype: object
```

```
[34]: #create a tall table
PersonTall = resultdf.reset_index()
PersonTall
#update the column names
PersonTall.columns = ['Person', 'Attribute', 'Value']
PersonTall
```

```
[34]:  Person Attribute Value
0    Bob      Age      32
1    Bob    Weight    128
2  Alice      Age      24
3  Alice    Weight     86
4  Steve      Age      64
5  Steve    Weight     95
```

```
[35]: #reset to original structure by simply unstacking the resultdf
resultdf1 = resultdf.unstack()
```

```
resultdf1
```

```
[35]:
```

	Age	Weight
Person		
Bob	32	128
Alice	24	86
Steve	64	95