

Pandas: Convert JSON to Pandas Dataframe

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Experts,

I am having issues parsing Json to Pandas and then save it in CSV format.

```
data2 = {"date": "2018-01-02", "data": {"AAPL": {"open": "170.16", "close": "172.26", "high": "172.30", "low": "169.26", "volume": "25555934"}, "MSFT": {"open": "85.50", "close": "86.13", "high": "86.31", "low": "85.95", "volume": "22483797"}}
```

If I try:

```
df = pd.DataFrame.from_dict(json_normalize(data2), orient='columns')
print(df)
```

Everything gets printed in a single line:

```
data.AAPL.close data.AAPL.high data.AAPL.low data.AAPL.open ... data.MSFT.low data.MSFT.open data.MSFT.volume date
0 172.26 172.30 169.26 170.16 ... 85.50 86.13 22483797 2018-01-02
```

If I do:

```
jdata = json.loads(data2)
df = pd.DataFrame(jdata)
print(df.T)
```

I get an error: `TypeError: the JSON object must be str, bytes or bytearray, not 'dict'`

I am looking to print it in the following table format so I can then save it as csv:

Date	Data	Open	Close	High	Low	Volume
2018-01-02	AAPL	170.16	172.26	172.30	169.26	25555934
2018-01-02	MSFT	86.13	85.95	86.31	85.50	22483797


What is the correct way to achieve my goal?

Thanks !!

json python-3.x pandas dataframe

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asked Dec 13 '18 at 2:46



Eric Arambula
90 ● 9

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2 Answers

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2



You can use `apply` to turn the dict keys into pandas `Series`

```
df = pd.DataFrame.from_dict(data2)
df = pd.concat([df['date'], df['data'].apply(pd.Series)], axis=1)
print(df)
```

	date	open	close	high	low	volume
AAPL	2018-01-02	170.16	172.26	172.30	169.26	25555934
MSFT	2018-01-02	86.13	85.95	86.31	85.50	22483797


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answered Dec 13 '18 at 3:04



zrelola
758 ● 1 ● 5 ● 26

@W-B, let me pick your brain, what is the difference vs the method you proposed ? What are the downsides ? – [Eric Arambula](#) Dec 13 '18 at 3:22

@EricArambula speed, apply is timing cost function , since you have stock data , when the size is increase , you will find apply + pd.Series slow – [WeNYoBen](#) Dec 13 '18 at 3:22 

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1



I will using your original output and modify it

```
s=pd.DataFrame(data2)
pd.concat([s.drop('data',1),pd.DataFrame(s.data.tolist(),index=s.index)],1)
      date  close  high  low  open  volume
AAPL 2018-01-02 172.26 172.30 169.26 170.16 25555934
MSFT 2018-01-02  85.95  86.31  85.50  86.13 22483797
```

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answered Dec 13 '18 at 3:01



[WeNYoBen](#)

159k ● 8 ● 55 ● 86

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