Seaborn implot with equation and R2 text
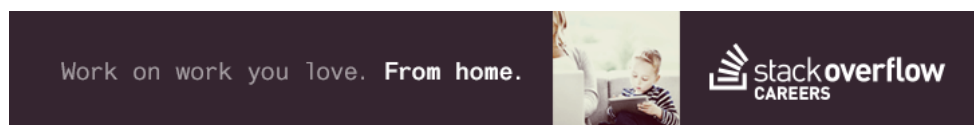
In my regular data analysis work, I have switched to use 100% python since the seaborn package becomes available. Big thanks to this wonderful package. However, One excel-chart feature I miss is to display the polyfit equation and/or R2 value when use the lmplot() function. Does anyone know an easy way to add that?

python   matplotlib   seaborn

asked Aug 30 '14 at 5:11

user3287545
66   5

possible duplicate of How do I calculate r-squared using Python and Numpy? – MattDMo Aug 30 '14 at 5:36

It's not really a duplicate because the question is whether this can be added automatically by the seaborn functions, not how to calculate it manually. – mwaskom Aug 30 '14 at 15:16

1 Answer

It can't be done automatically with `lmplot` because it's undefined what that value should correspond to when there are multiple regression fits (i.e. using a `hue`, `row` or `col` variable.

But this is part of the similar `jointplot` function. By default it shows the correlation coefficient and p value:

```python
import seaborn as sns
import numpy as np

x, y = np.random.randn(2, 40)
sns.jointplot(x, y, kind="reg")
```

But you can pass any function. If you want R^2, you could do:

```python
from scipy import stats
def r2(x, y):
    return stats.pearsonr(x, y)[0] ** 2
sns.jointplot(x, y, kind="reg", stat_func=r2)
```
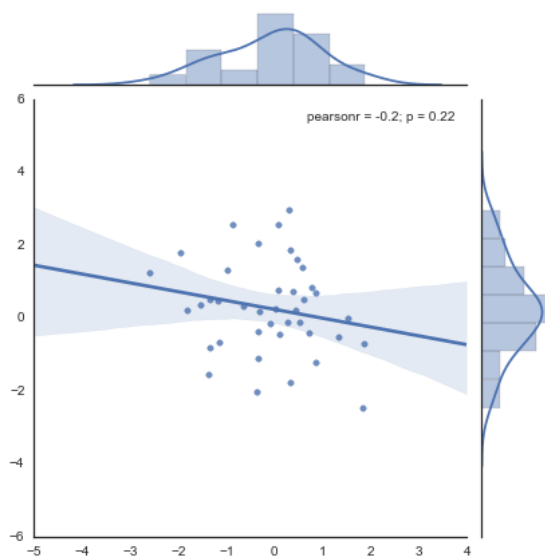
answered Aug 30 '14 at 15:22

mwaskom
8,167   2   19   33

Thanks, I think I can use the jointplot() one by one instead of the nice multiple chart feature of lmplot(). However, can the top/side histograms be optional so that I can pack many into a lmplot() equivalent. – user3287545 Aug 30 '14 at 16:09

What is p value (0,22) here? I guess pearson correlation is pearsonr value. – cacert Jan 6 at 20:41