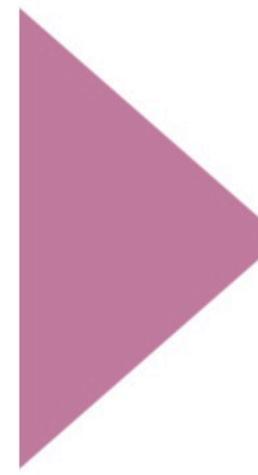


Data Visualization with Python

Session- 3





Seaborn-1





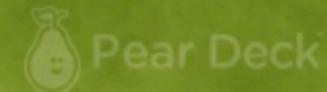
Table of Contents



- ▶ Scatter Plots
- ▶ Distribution Plots
- ▶ Categorical Plots
- ▶ Comparison Plots
- ▶ Matrix and Grid Plots

I've completed the pre-class content.

Yes

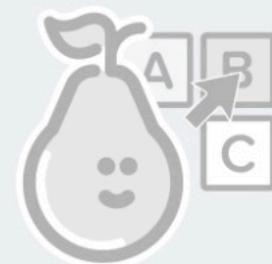


No



Students choose an option

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Do not remove this bar



No Multiple Choice Response
You didn't answer this question

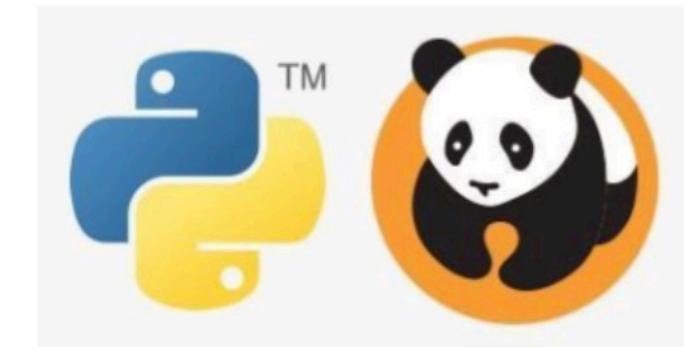
Seaborn



```
import  
matplotlib.pyplot as plt
```



```
import  
matplotlib.pyplot as plt  
  
import seaborn as sns
```



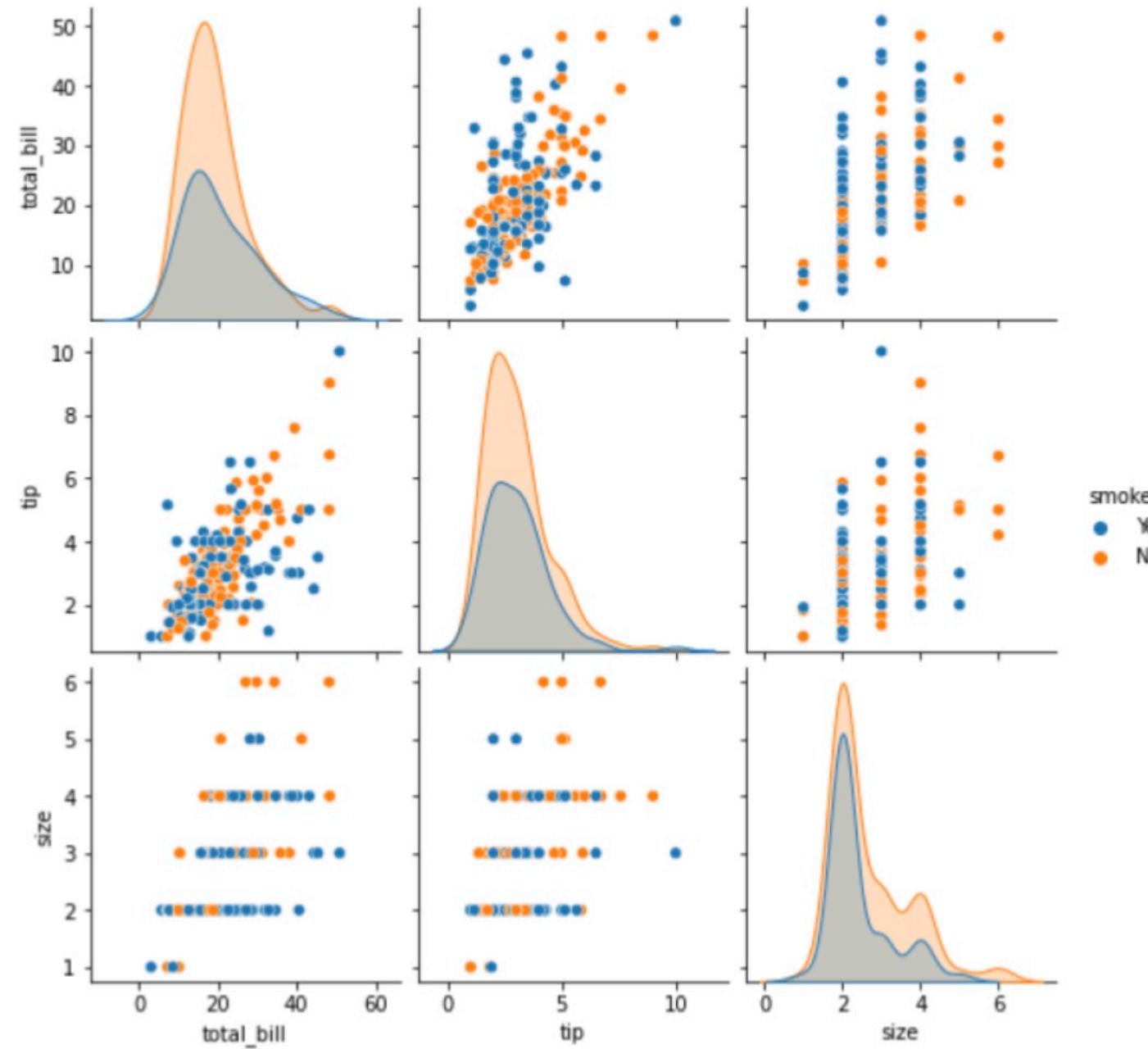
```
import pandas as pd
```

Create
figure
axes
subplots

Built on matplotlib
and
can be used together
with it

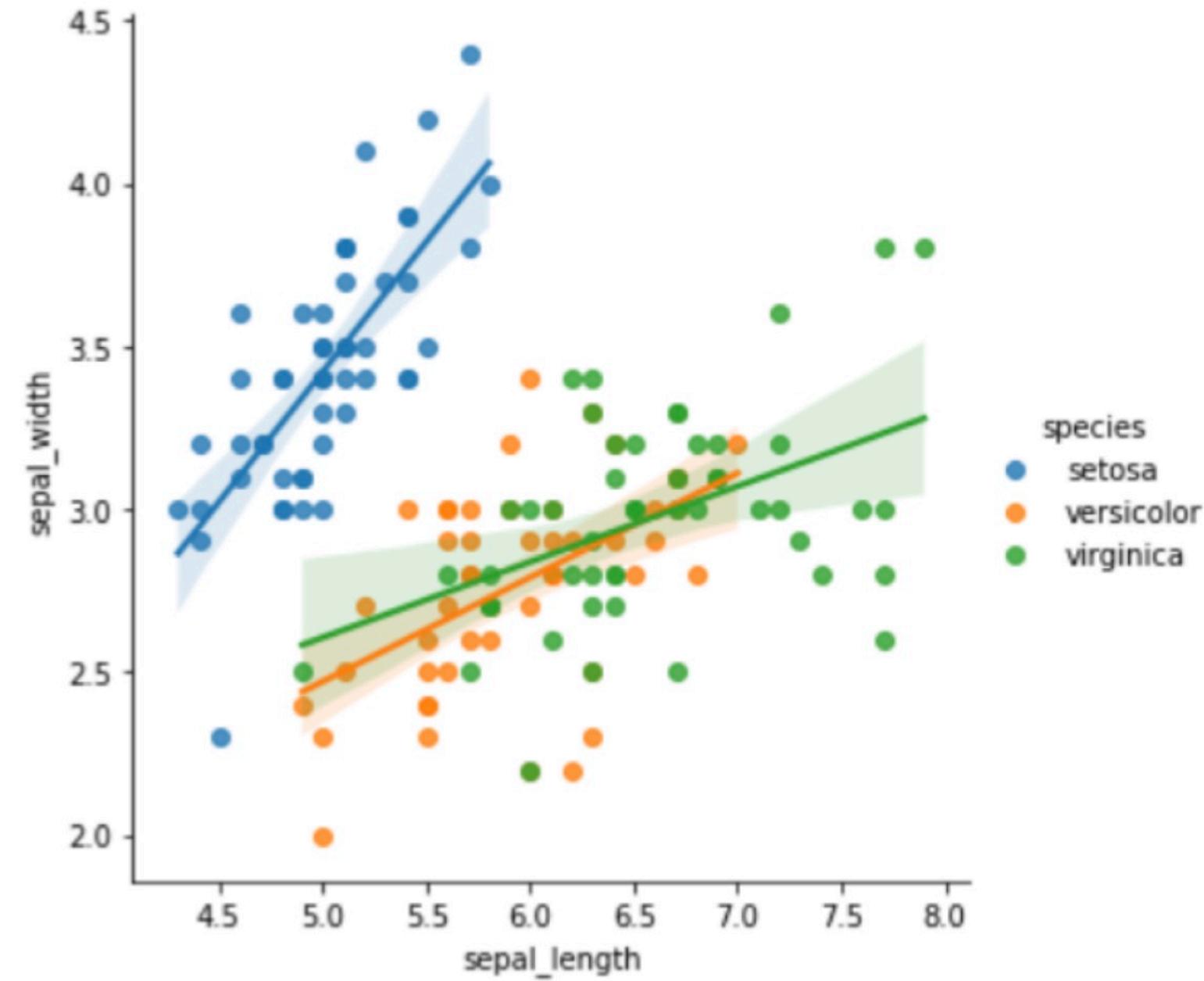
No need to import
matplotlib or
seaborn

► Seaborn Fascinating Plots

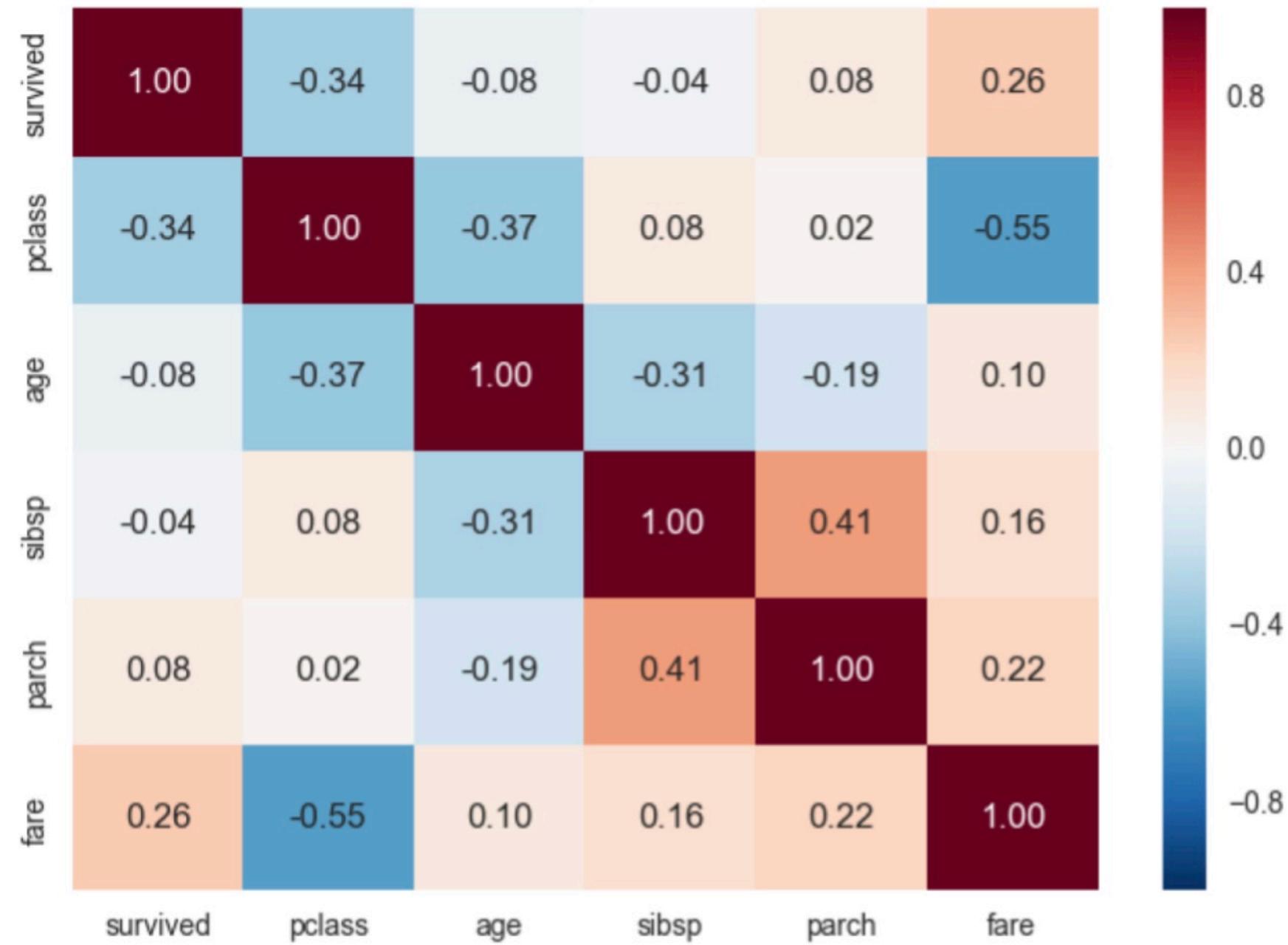


<http://seaborn.pydata.org/tutorial.html>

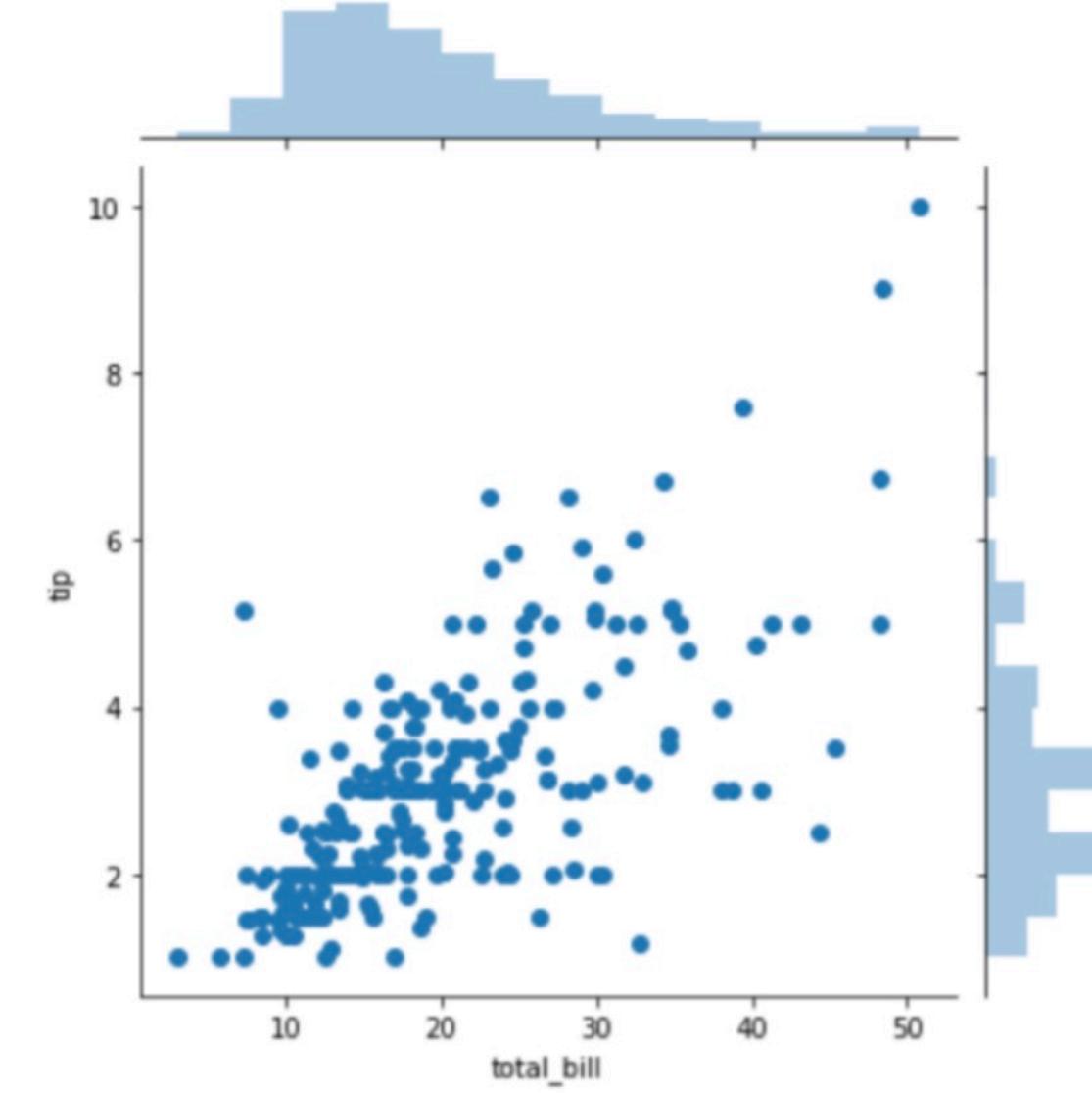
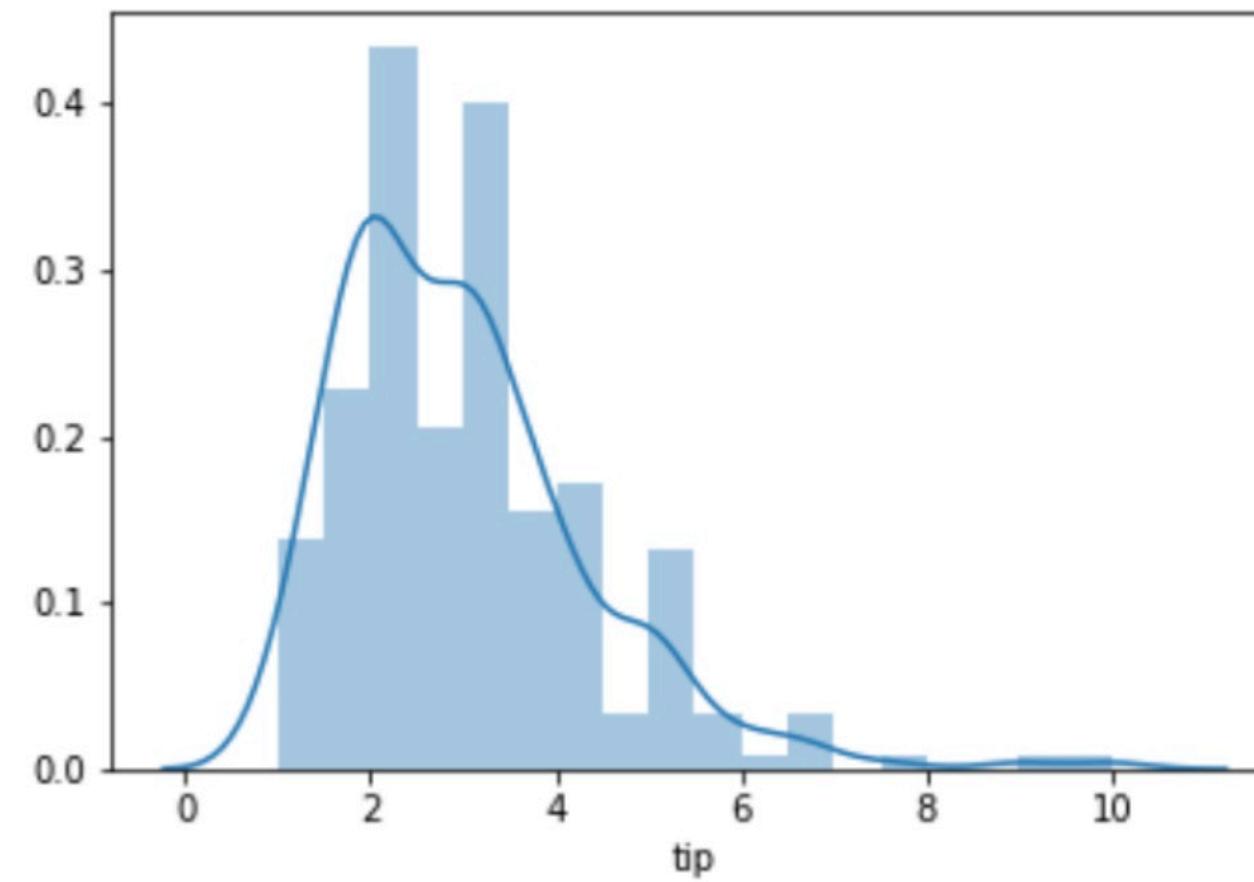
► Seaborn Stats (ci)



► Seaborn Stats (corr)



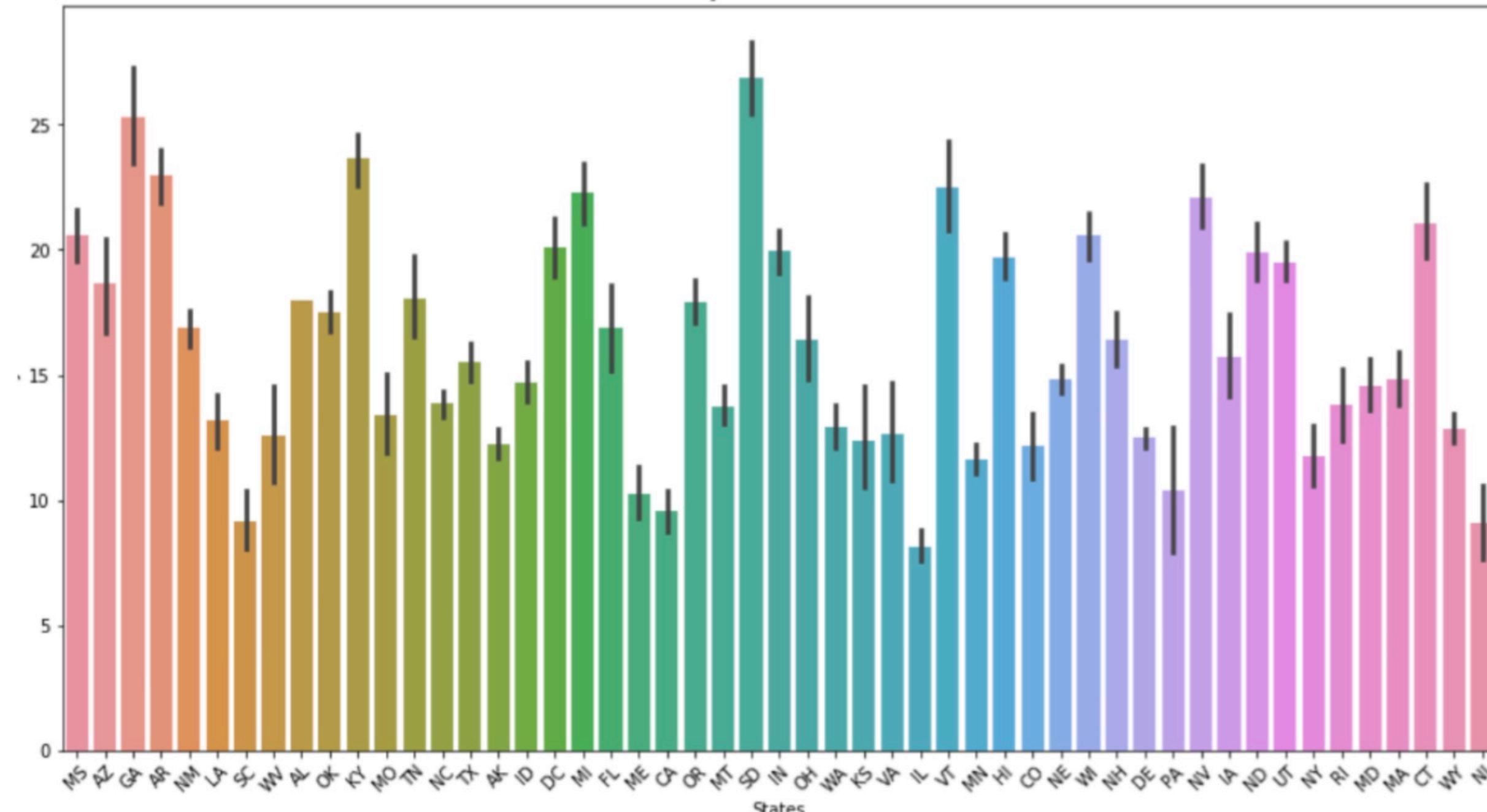
▶ Seaborn Stats (kde)



► Seaborn Stats (sd)



Poverty Rate Given States



► Seaborn Dataset

```
import pandas
import matplotlib
import scipy
import seaborn as sns
print(sns.get_dataset_names())
```

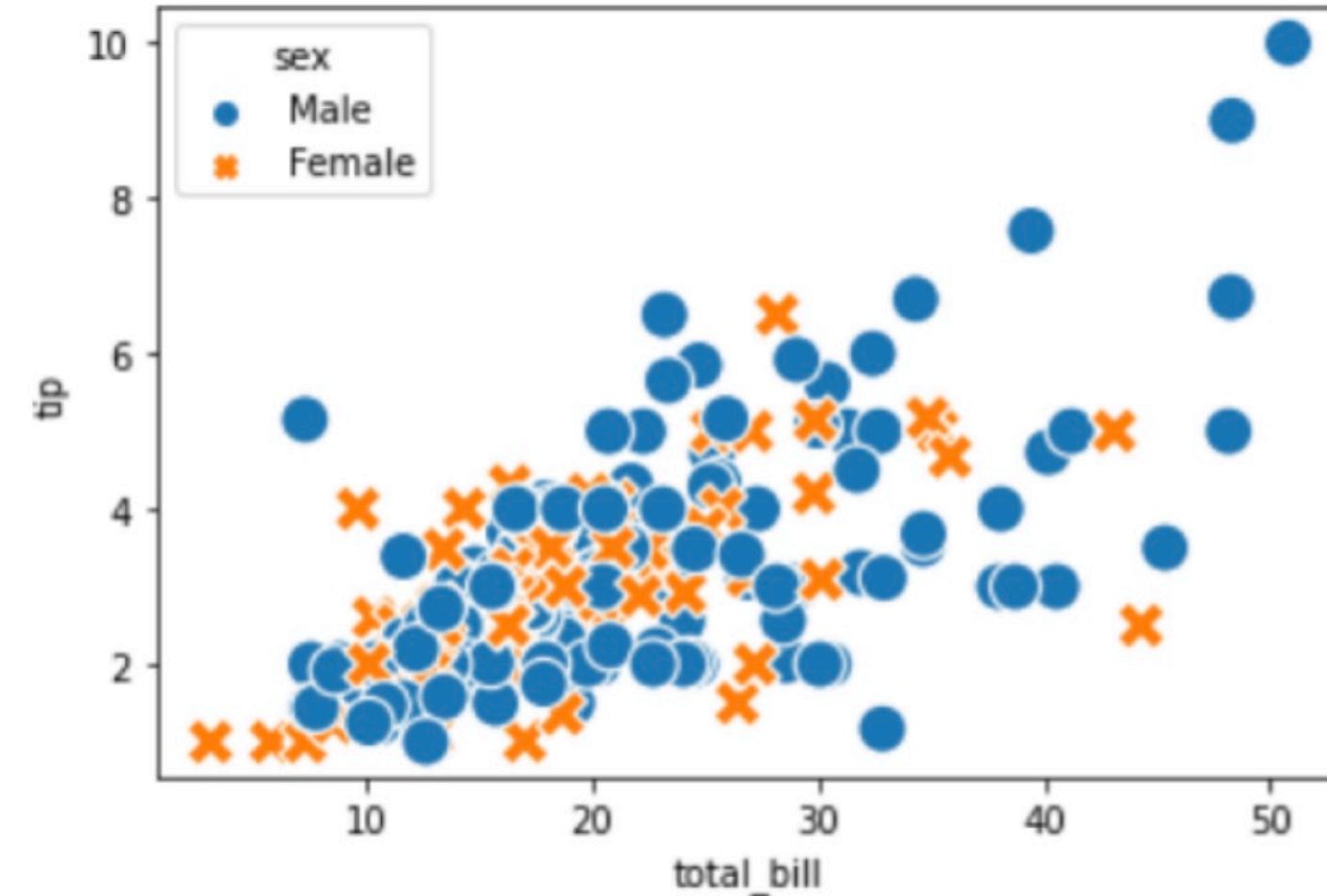
Output:

```
['anagrams', 'anscombe', 'attention', 'brain_networks',
'car_crashes', 'diamonds', 'dots', 'exercise', 'flights',
'fmri', 'gammas', 'geyser', 'iris', 'mpg', 'penguins',
'planets', 'tips', 'titanic']
```

▶ Scatter Plots

```
import seaborn as sns  
  
tips = sns.load_dataset("tips")  
  
sns.scatterplot( x = "total_bill",  
                  y = "tip",  
                  data = tips,  
                  hue = "sex",  
                  s = 200,  
                  style = "sex")
```

	total_bill	tip	sex	smoker	day	time	size
0	16.99	1.01	Female	No	Sun	Dinner	2
1	10.34	1.66	Male	No	Sun	Dinner	3
2	21.01	3.50	Male	No	Sun	Dinner	3
3	23.68	3.31	Male	No	Sun	Dinner	2
4	24.59	3.61	Female	No	Sun	Dinner	4



▶ Seaborn Plot Types



Distributions Plots

- `kdeplot`
- `rugplot`
- `displot`
- `histplot`

Categorical Plots

- `barplot`
- `countplot`
- `boxplot`
- `swarmplot`
- `violinplot`

Comparison Plots

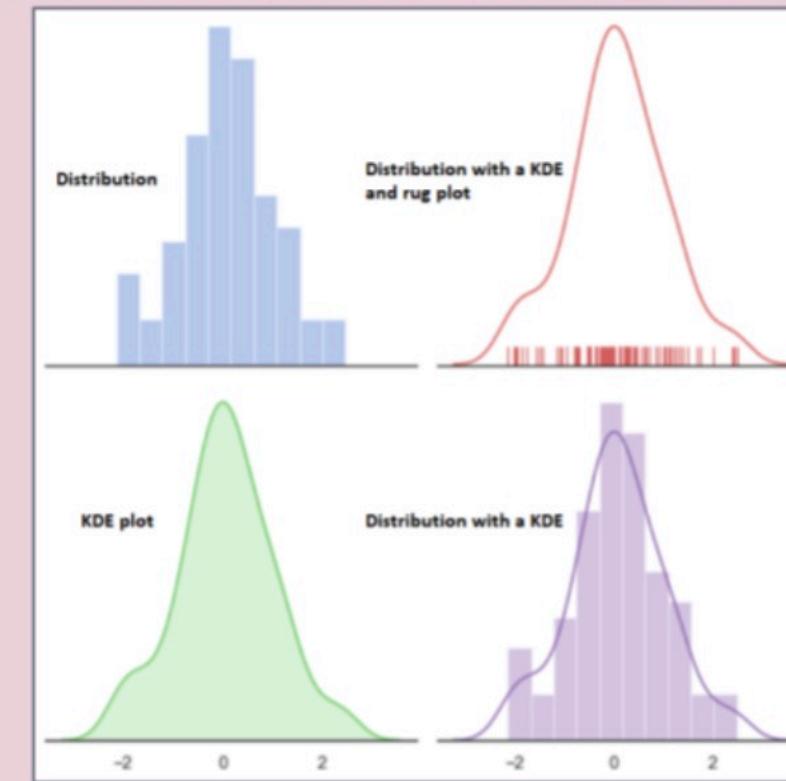
- `jointplot`
- `pairplot`
- `catplot`
- `matrix plot`
- `grid plot`

Distribution Plots

The distributions module contains several functions designed to answer questions such as these.

The axes-level functions are

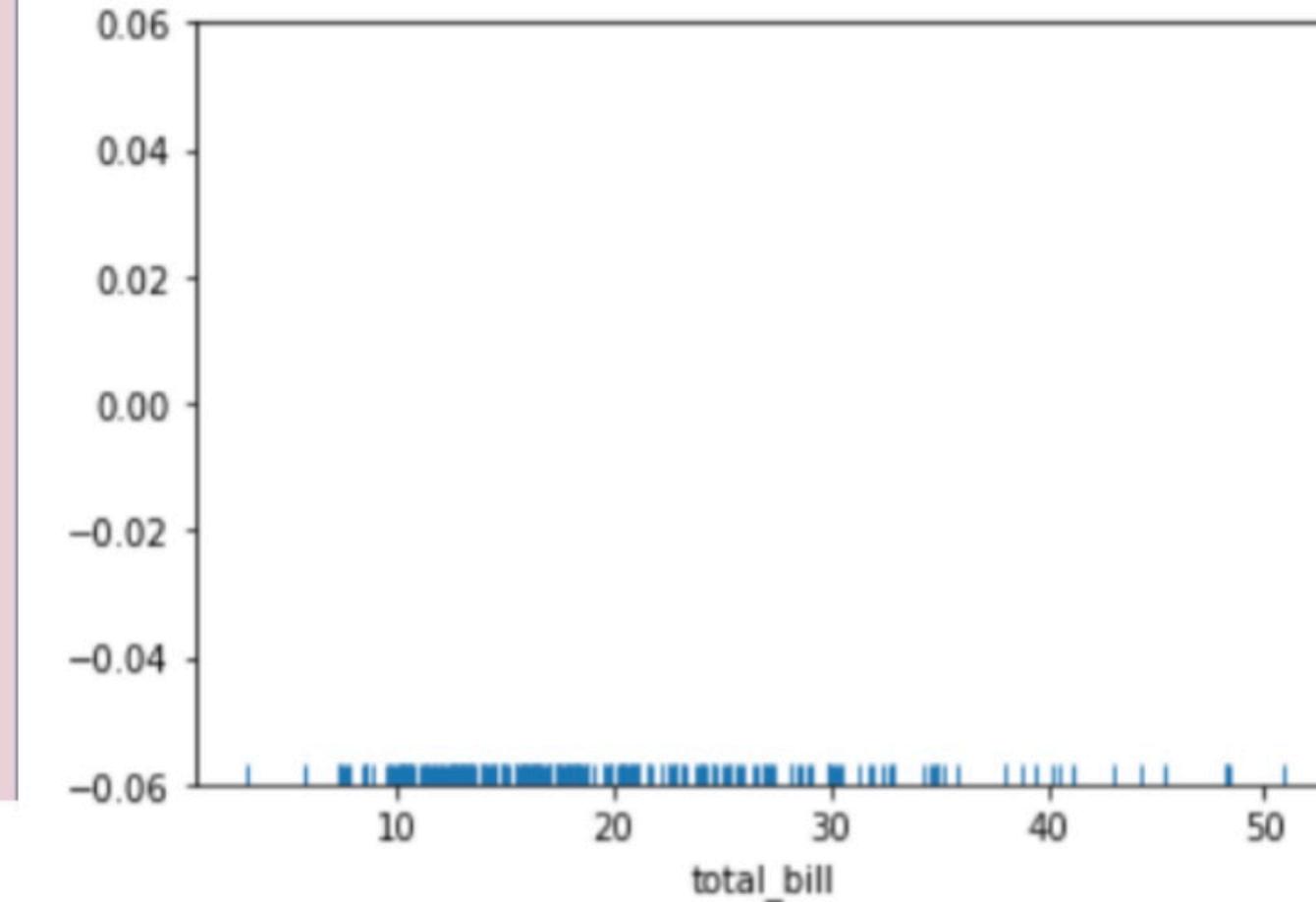
- `histplot()`,
- `kdeplot()`,
- `displot()`, and
- `rugplot()`.



<https://seaborn.pydata.org/tutorial/distributions.html>

Distribution Plots - rugplot

```
import seaborn as sns  
  
tips = sns.load_dataset("tips")  
  
sns.rugplot(x='total_bill',  
             data=tips)  
  
sns.rugplot(tips['total_bill'])
```

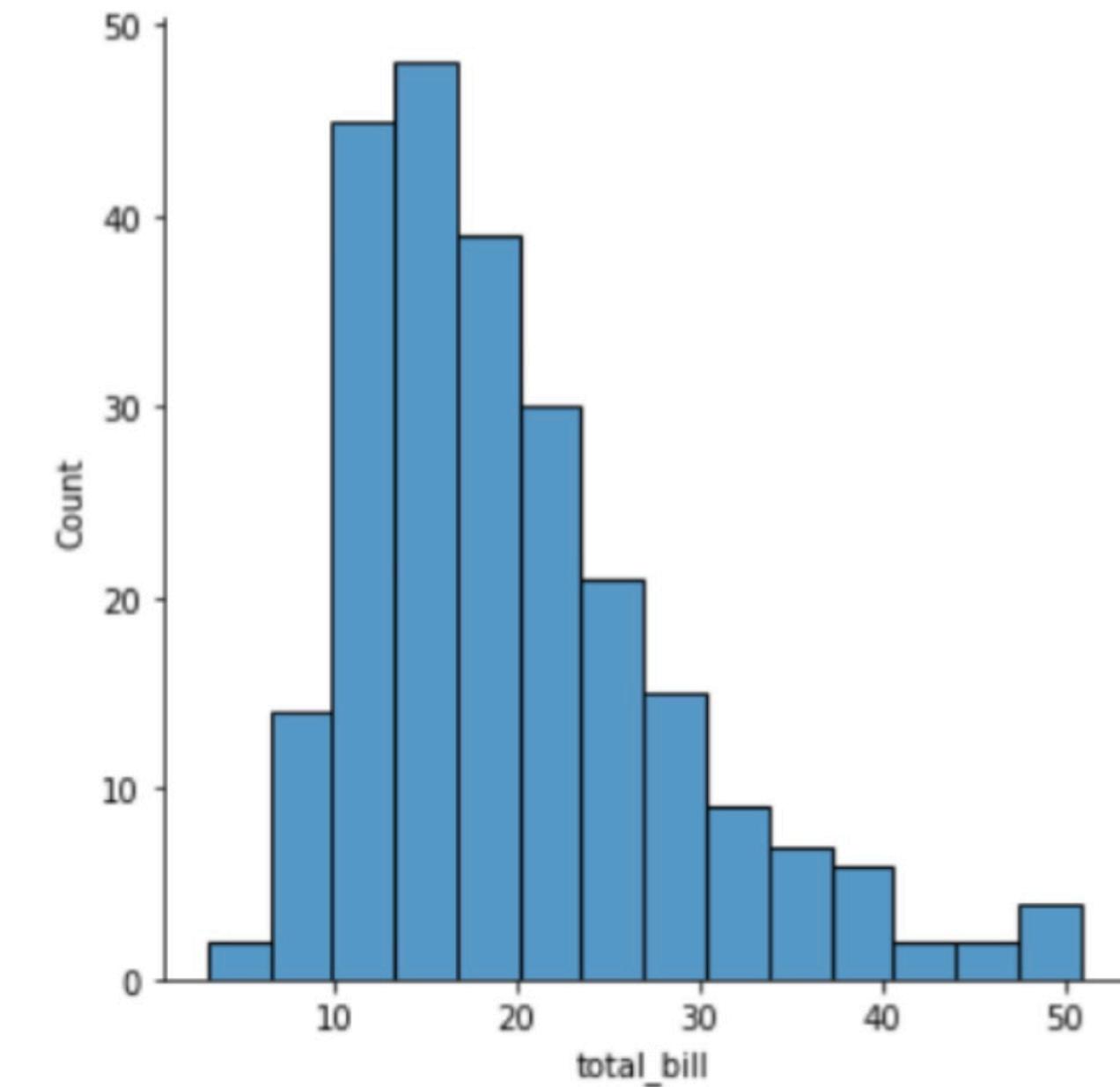


	total_bill	tip	sex	smoker	day	time	size
0	16.99	1.01	Female	No	Sun	Dinner	2
1	10.34	1.66	Male	No	Sun	Dinner	3
2	21.01	3.50	Male	No	Sun	Dinner	3
3	23.68	3.31	Male	No	Sun	Dinner	2
4	24.59	3.61	Female	No	Sun	Dinner	4

Distribution Plots - displot

```
import seaborn as sns  
  
tips = sns.load_dataset("tips")  
  
# Don't use distplot  
  
sns.displot(x='total_bill',  
            data=tips)  
  
sns.displot(tips['total_bill'])
```

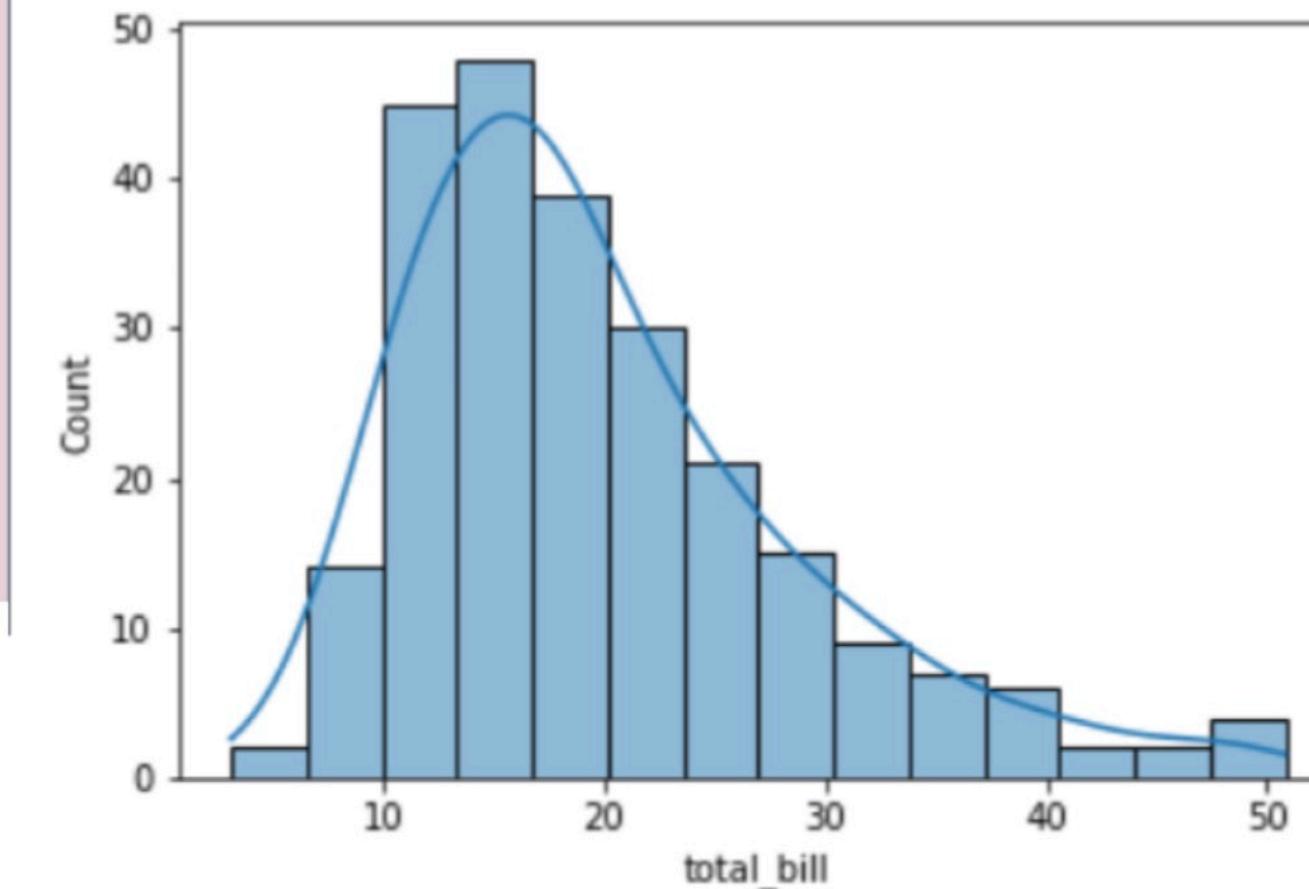
	total_bill	tip	sex	smoker	day	time	size
0	16.99	1.01	Female	No	Sun	Dinner	2
1	10.34	1.66	Male	No	Sun	Dinner	3
2	21.01	3.50	Male	No	Sun	Dinner	3
3	23.68	3.31	Male	No	Sun	Dinner	2
4	24.59	3.61	Female	No	Sun	Dinner	4



Distribution Plots - histplot

```
import seaborn as sns  
  
tips = sns.load_dataset("tips")  
  
sns.histplot(x='total_bill',  
             data=tips,      kde=True)  
  
sns.histplot(tips['total_bill'])
```

	total_bill	tip	sex	smoker	day	time	size
0	16.99	1.01	Female	No	Sun	Dinner	2
1	10.34	1.66	Male	No	Sun	Dinner	3
2	21.01	3.50	Male	No	Sun	Dinner	3
3	23.68	3.31	Male	No	Sun	Dinner	2
4	24.59	3.61	Female	No	Sun	Dinner	4

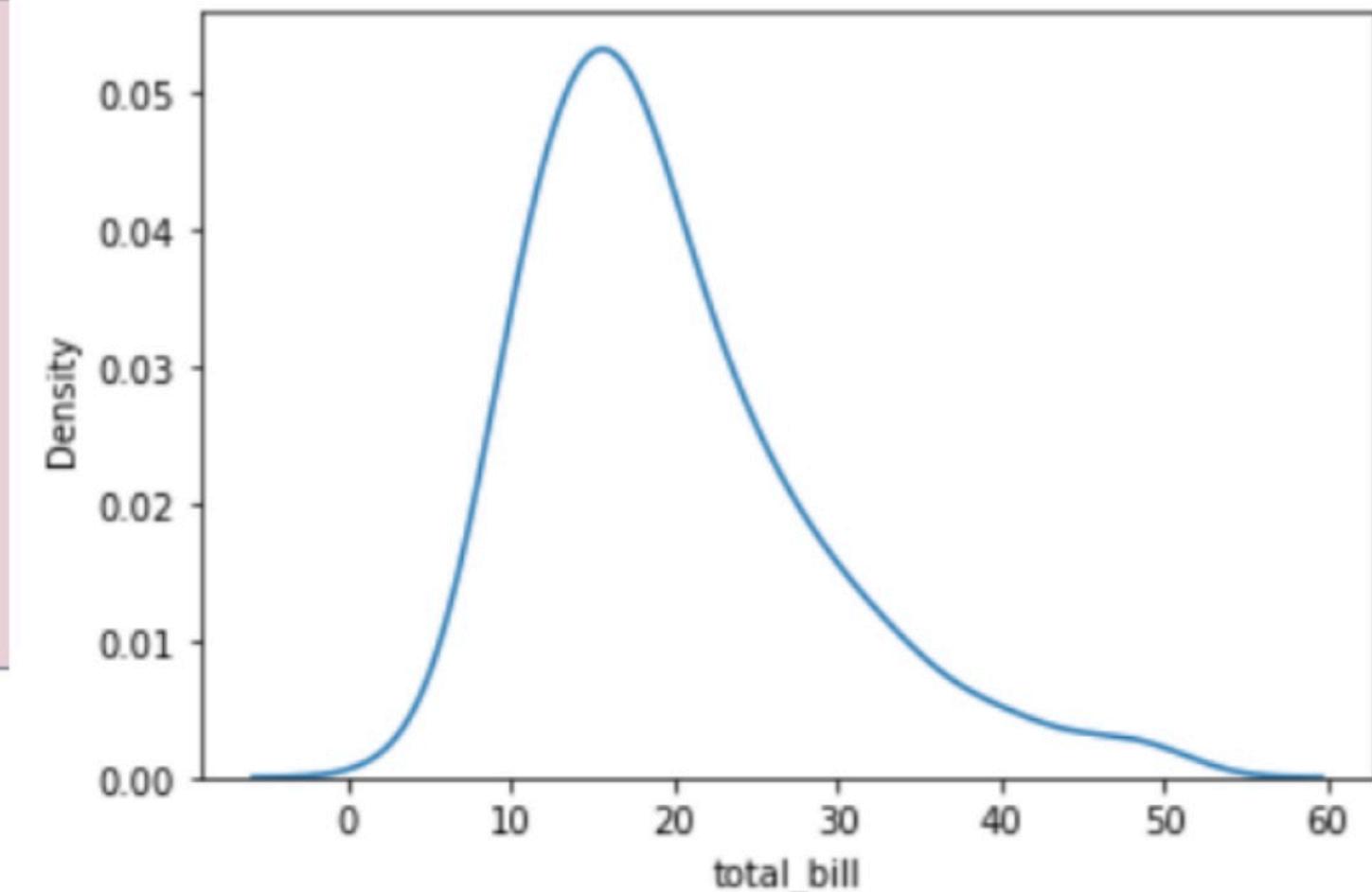


Distribution Plots - kde



```
import seaborn as sns  
  
tips = sns.load_dataset("tips")  
  
sns.kdeplot(x='total_bill',  
             data=tips)  
  
sns.kdeplot(tips['total_bill'])
```

	total_bill	tip	sex	smoker	day	time	size
0	16.99	1.01	Female	No	Sun	Dinner	2
1	10.34	1.66	Male	No	Sun	Dinner	3
2	21.01	3.50	Male	No	Sun	Dinner	3
3	23.68	3.31	Male	No	Sun	Dinner	2
4	24.59	3.61	Female	No	Sun	Dinner	4





> Kahoot!

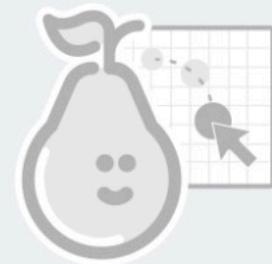
How well did you like this lesson?



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Do not remove this bar



Students, drag the icon!



No Draggable™ Response
You didn't answer this question