

```
In [2]: %matplotlib inline

import numpy as np
import pandas as pd
import matplotlib as mpl
import matplotlib.pyplot as plt
import seaborn as sns
import sys
import warnings

if not sys.warnoptions:
    warnings.simplefilter("ignore")

tips = sns.load_dataset("tips")
```

```
In [3]: tips.head()
```

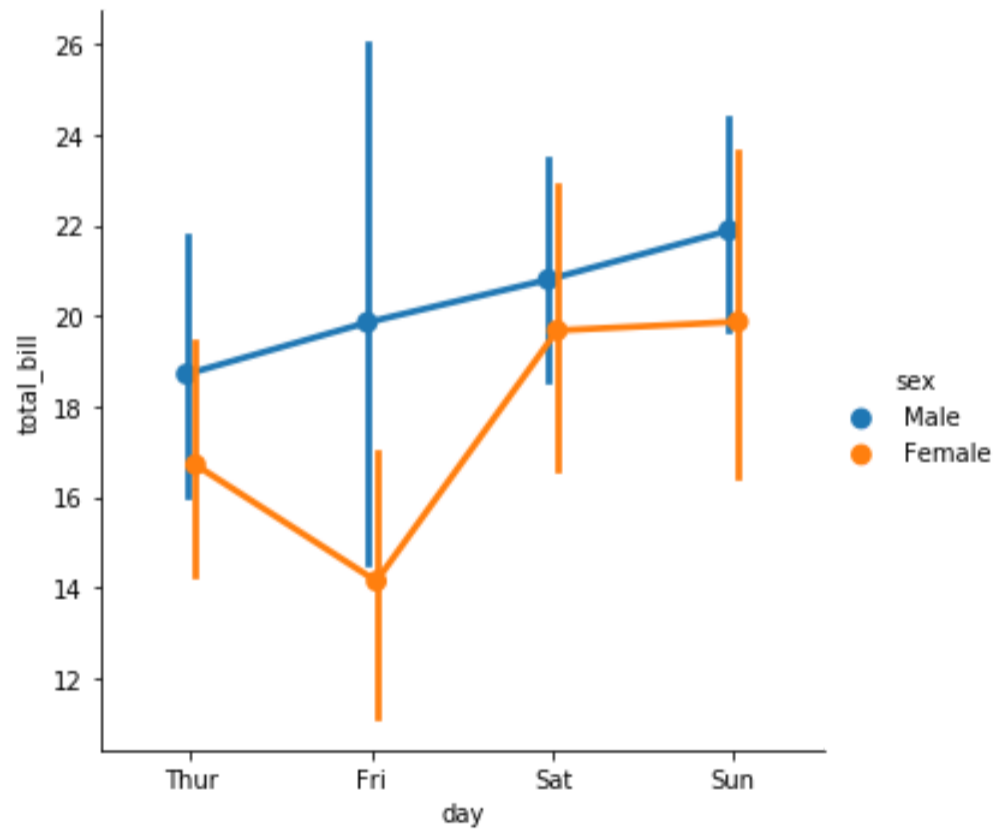
Out[3]:

	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

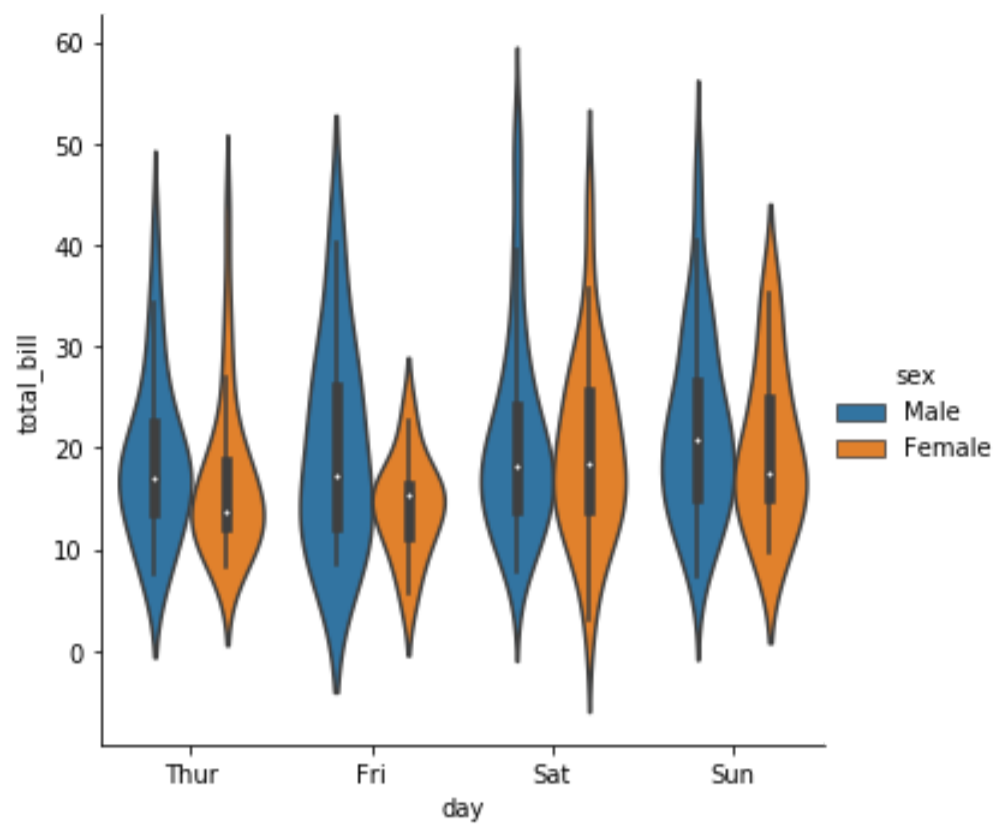
```
In [4]: tips.shape
```

Out[4]: (244, 7)

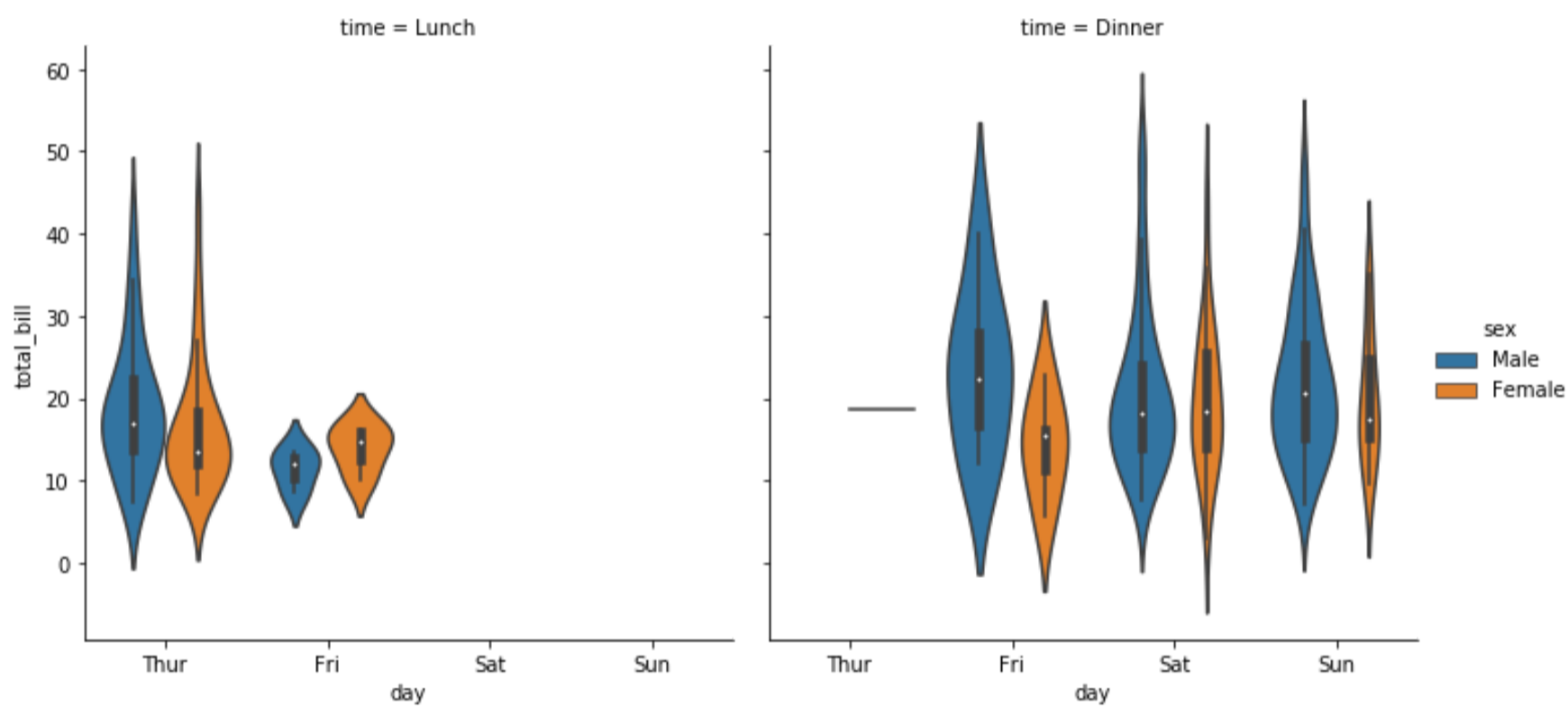
```
In [5]: g = sns.factorplot(x="day", y="total_bill", hue="sex", data=tips, dodge=True)
```



```
In [5]: g = sns.factorplot(x="day", y="total_bill", hue="sex",
                        data=tips, kind="violin", scale="width")
```



```
In [6]: g = sns.factorplot(x="day", y="total_bill", hue="sex",
                        data=tips, kind="violin", scale="count",
                        col="time")
```



```
In [ ]: import seaborn as sns; sns.set(style='ticks', color_codes=True)
```

```
In [ ]: tips.head()
```

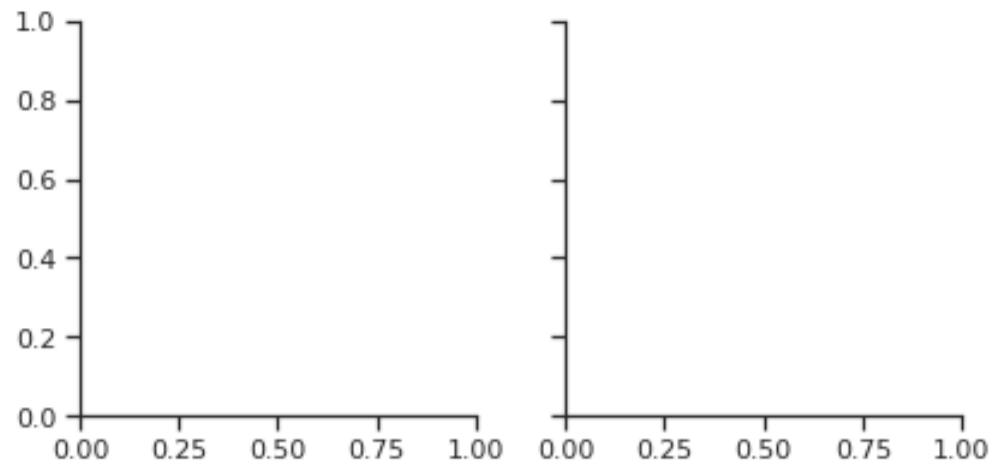
Out []:

	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

確率分布

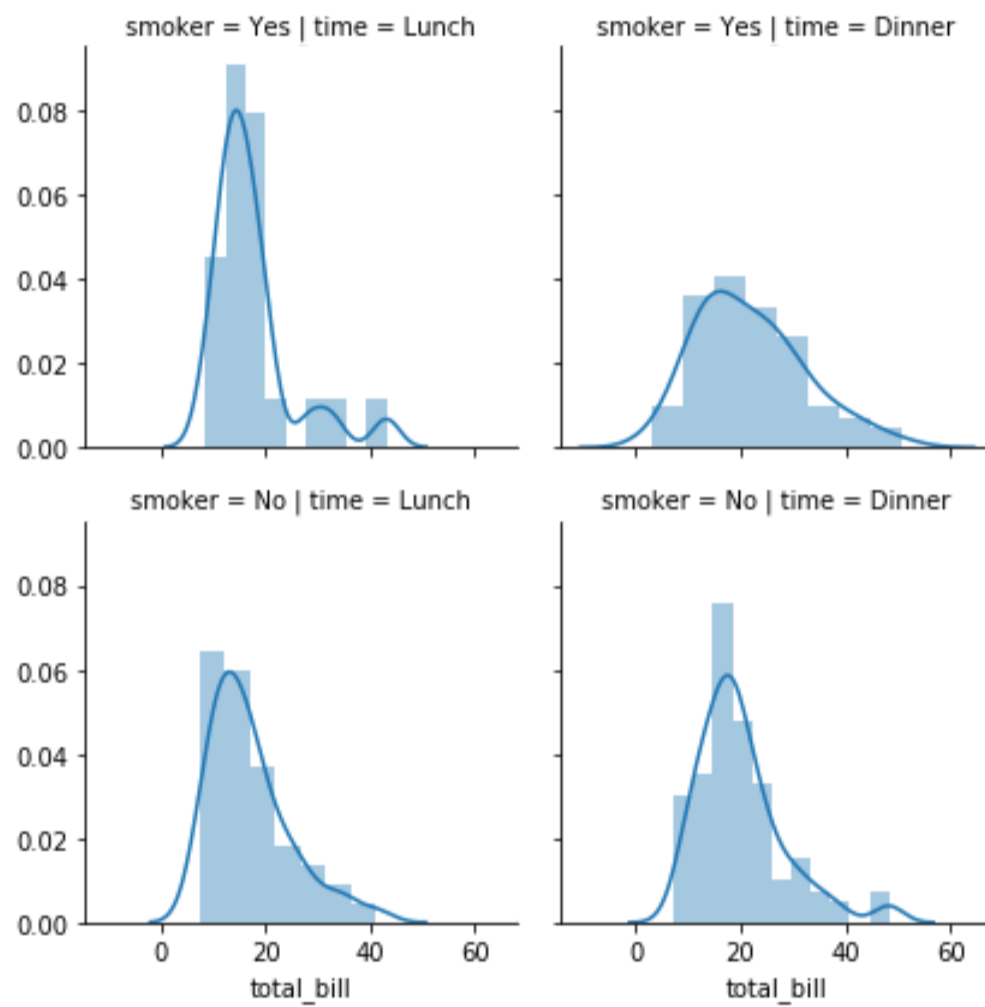
```
In [ ]: sns.FacetGrid(tips, col="smoker")
```

```
Out [ ]: <seaborn.axisgrid.FacetGrid at 0x7f59f3a72390>
```



```
In [7]: g = sns.FacetGrid(tips, col="time", row="smoker")  
g.map(sns.distplot, "total_bill")
```

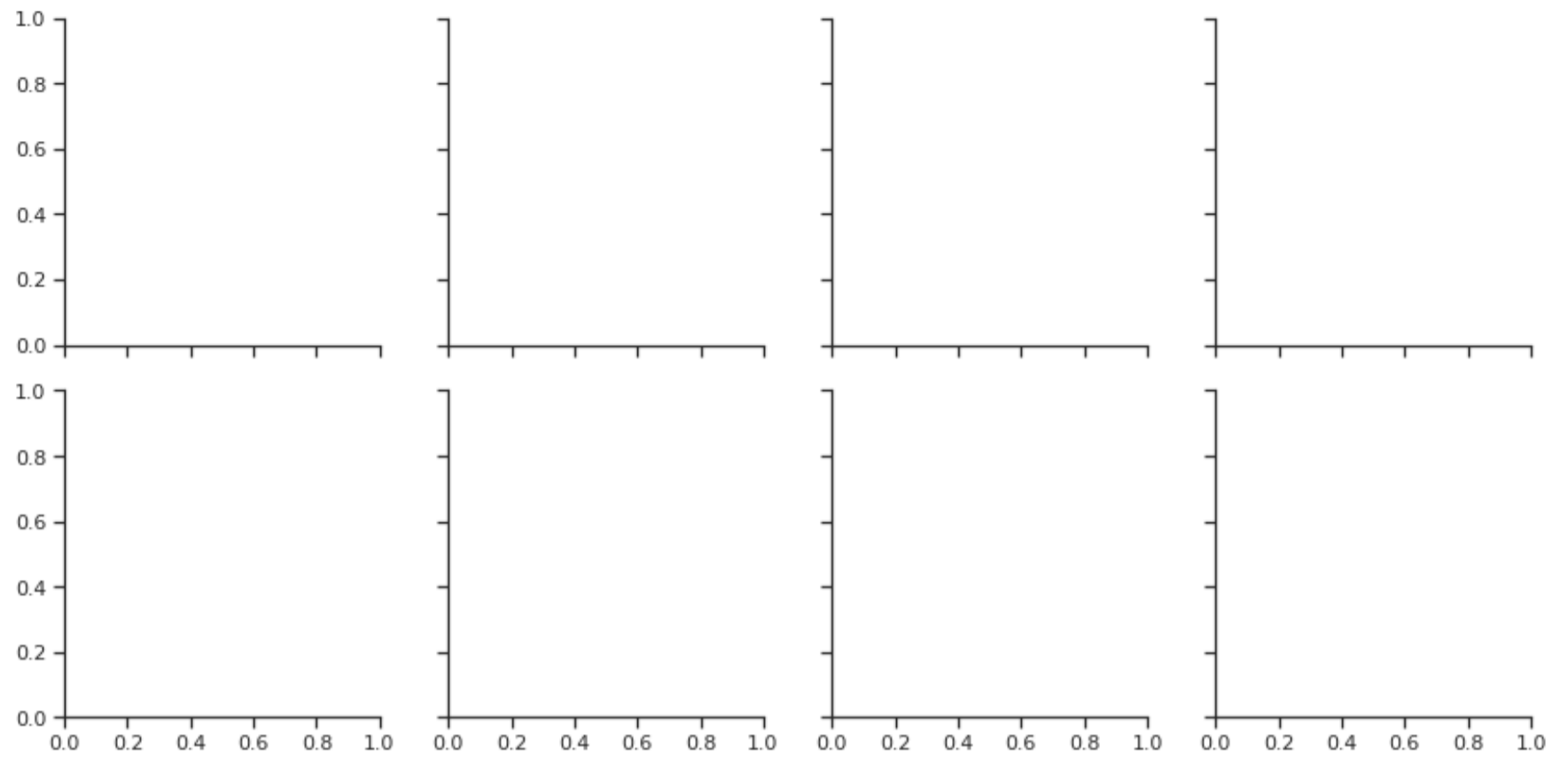
```
Out[7]: <seaborn.axisgrid.FacetGrid at 0x7f0f9f0c0250>
```



ここでランチと喫煙者の時、total_billの確率分布が大きいです。

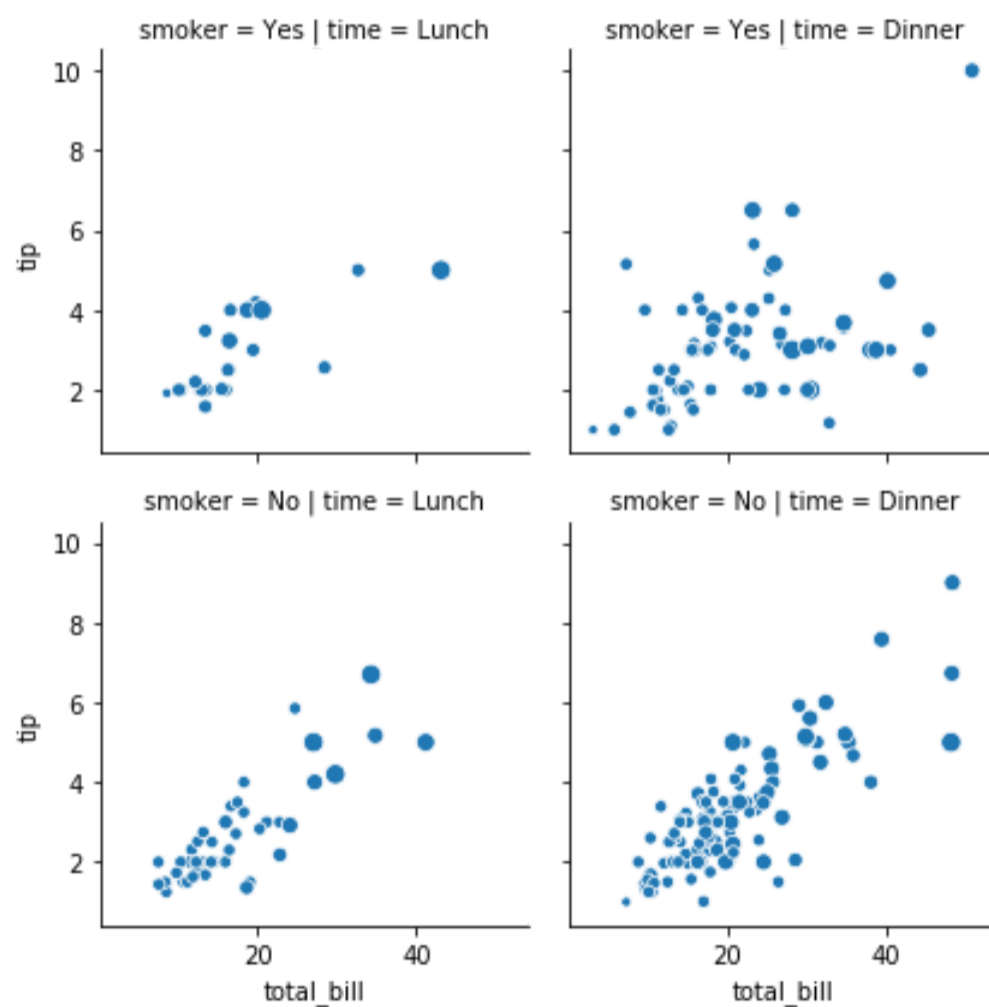
ここでディナーと非喫煙者の時、total_billの確率分布の標準偏差が小さいです。

```
In [ ]: g = sns.FacetGrid(tips, col="day", row="sex")
```

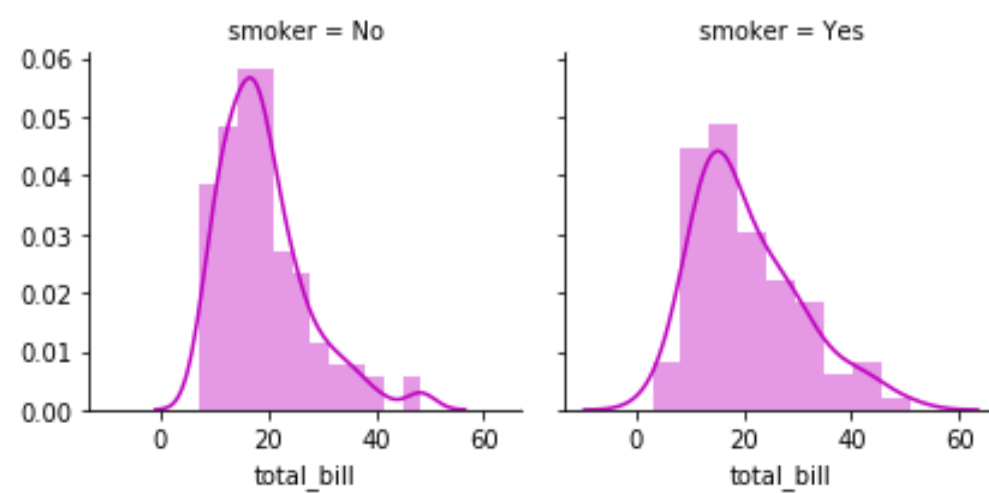


```
In [8]: g = sns.FacetGrid(tips, col="time", row="smoker")  
g.map_dataframe(sns.scatterplot, "total_bill", "tip", size="size")
```

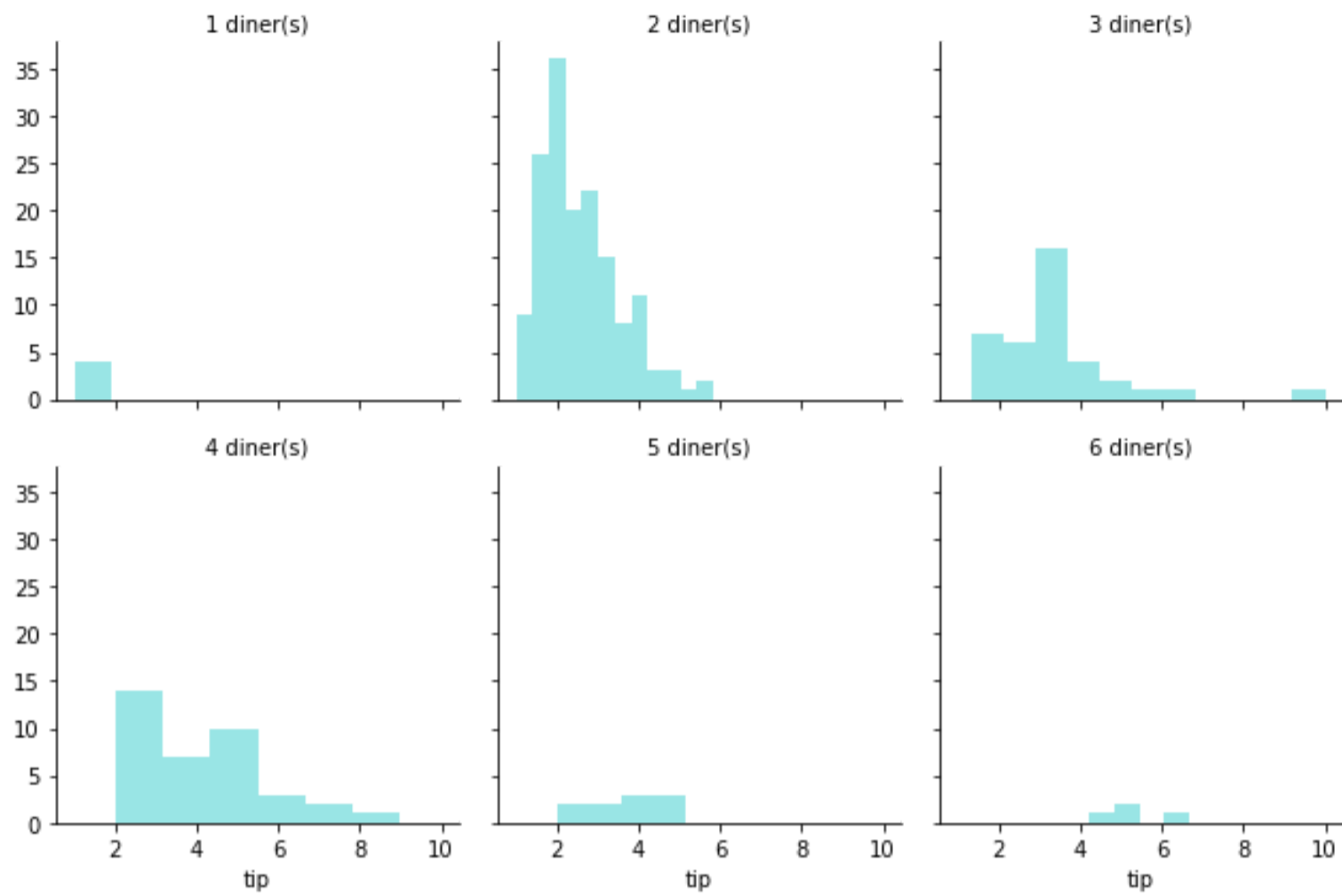
Out[8]: <seaborn.axisgrid.FacetGrid at 0x7f0f9ef92a50>



```
In [9]: g=sns.FacetGrid(tips, col="smoker", col_order=['No', 'Yes'])  
g=g.map(sns.distplot, "total_bill", color="m")
```



```
In [10]: g=sns.FacetGrid(tips,col="size",col_wrap=3)
g=(g.map(sns.distplot,"tip",color="c",kde=False).set_titles("{col_name} diner(s)"))
```



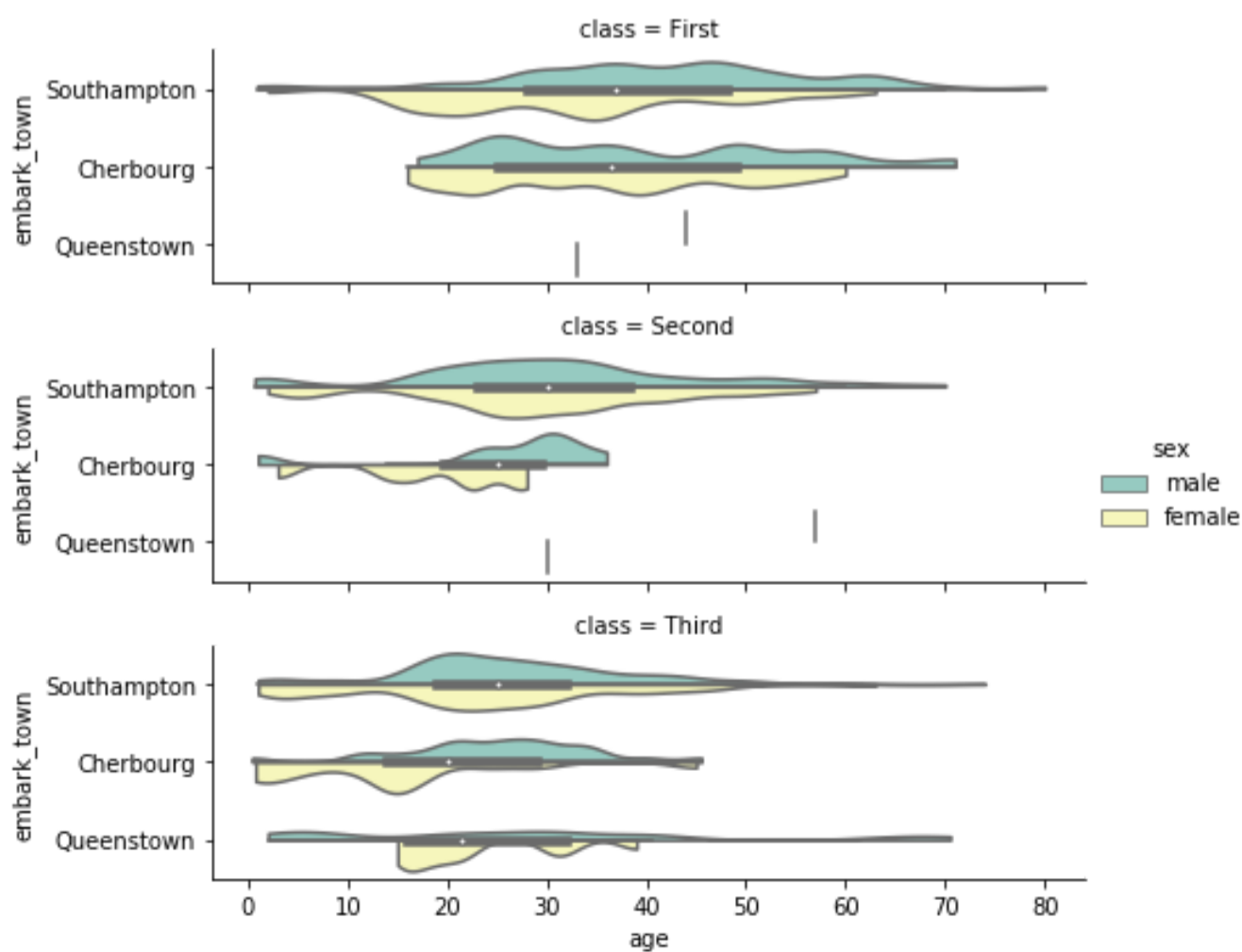
In []:

In []:

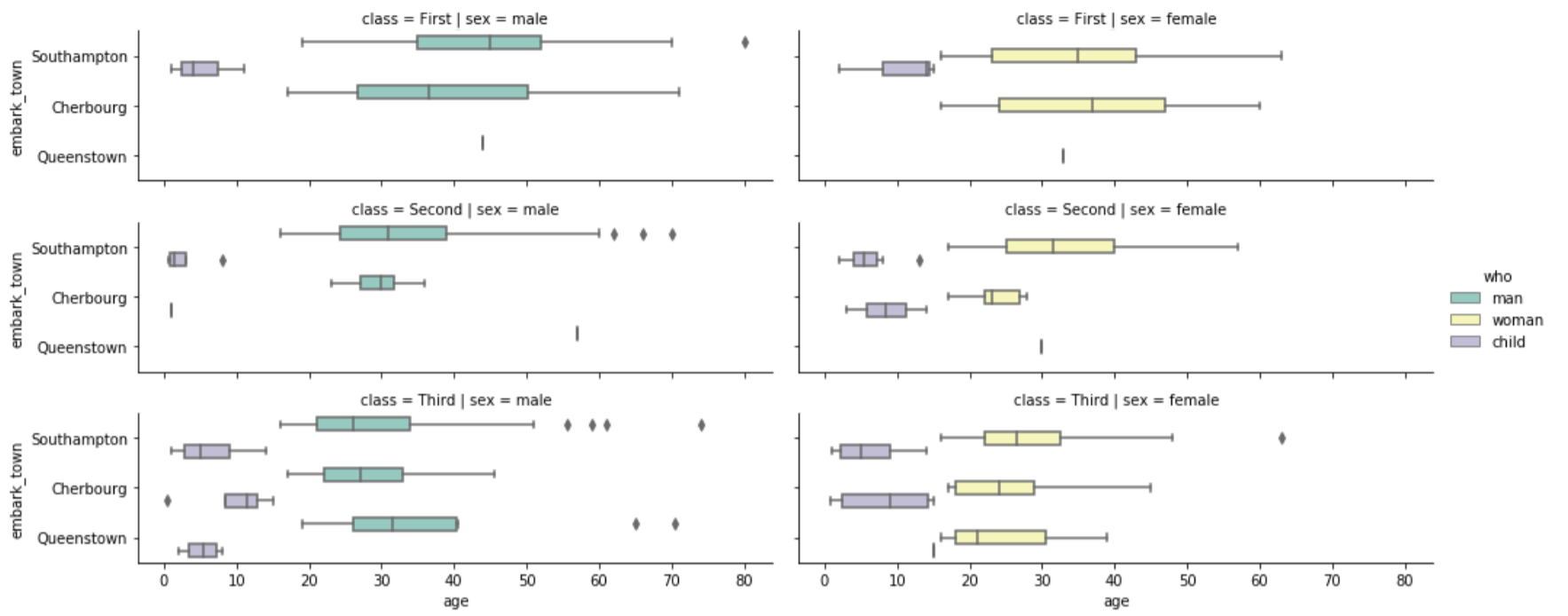
In []:

```
In [6]: titanic = sns.load_dataset("titanic")

g = sns.factorplot(x="age", y="embark_town",
hue="sex", row="class",
data=titanic[titanic.embark_town.notnull()],
orient="h", size=2, aspect=3.5, palette="Set3",
kind="violin", split=True, cut=0, bw=.2)
```



```
In [12]: g = sns.factorplot(x="age", y="embark_town",
                        hue="who", row="class", col="sex",
                        data=titanic[titanic.embark_town.notnull()],
                        orient="h", size=2, aspect=3.5, palette="Set3",
                        kind="box")
```



In []:

In []: