

Categorical Data Plots

Now let's discuss using seaborn to plot categorical data! There are a few main plot types for this:

- factorplot
- boxplot
- violinplot
- stripplot
- swarmplot
- barplot
- countplot

```
In [2]: import seaborn as sns
%matplotlib inline
```

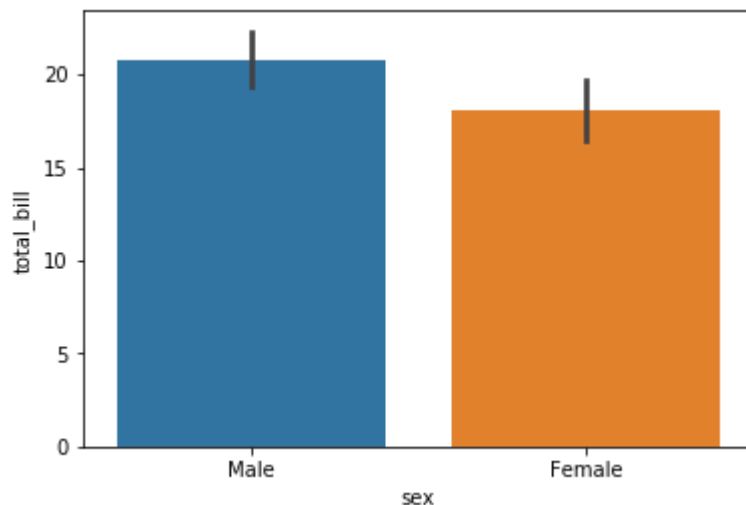
```
In [3]: tips = sns.load_dataset('tips')
tips.head()
```

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

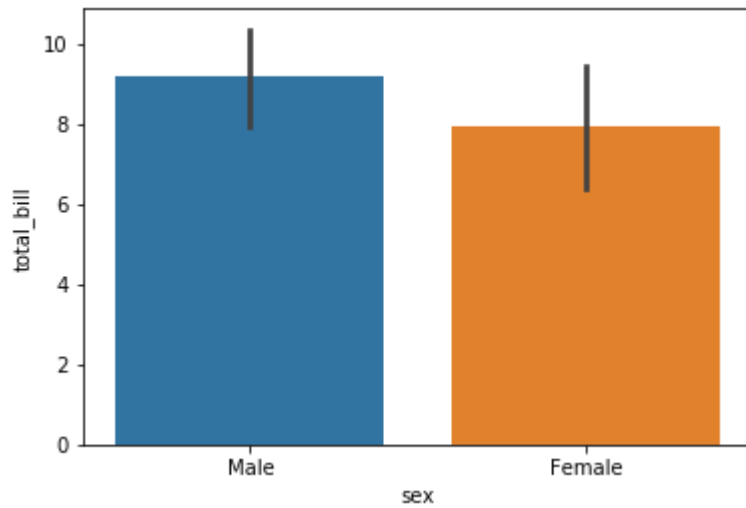
```
In [4]: sns.barplot(x='sex',y='total_bill',data=tips)
```

Out[4]: <matplotlib.axes._subplots.AxesSubplot at 0x9840ef0>



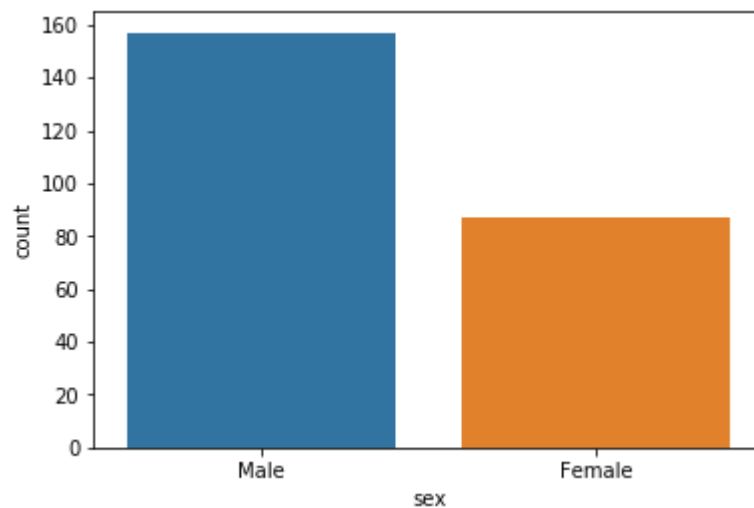
```
In [5]: import numpy as np
sns.barplot(x='sex',y='total_bill',data=tips,estimator=np.std)
```

Out[5]: <matplotlib.axes._subplots.AxesSubplot at 0x98c1940>



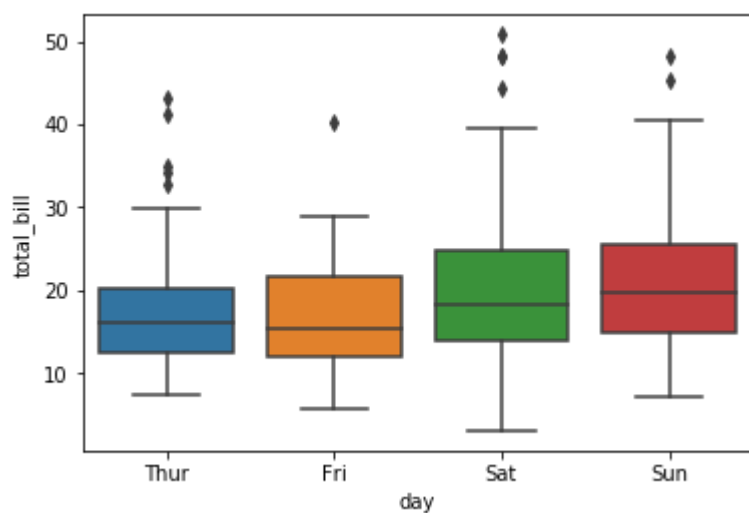
```
In [6]: sns.countplot(x='sex',data=tips)
```

Out[6]: <matplotlib.axes._subplots.AxesSubplot at 0x9949ef0>



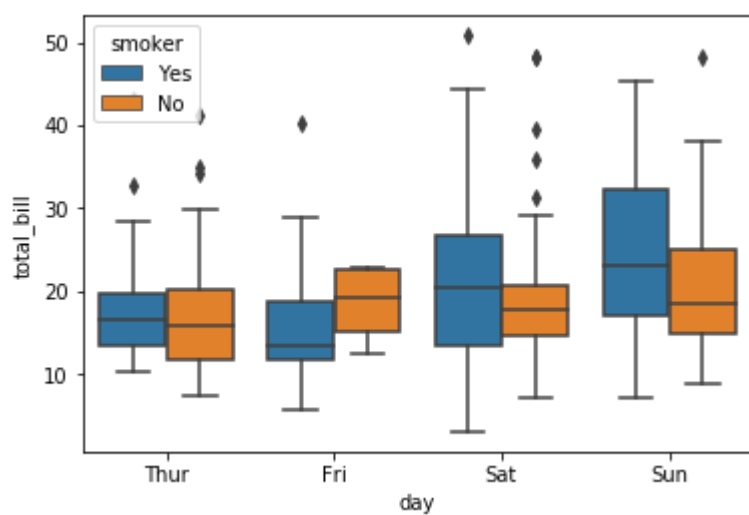
```
In [7]: sns.boxplot(x='day',y='total_bill',data=tips)
```

```
Out[7]: <matplotlib.axes._subplots.AxesSubplot at 0xaa6ea58>
```



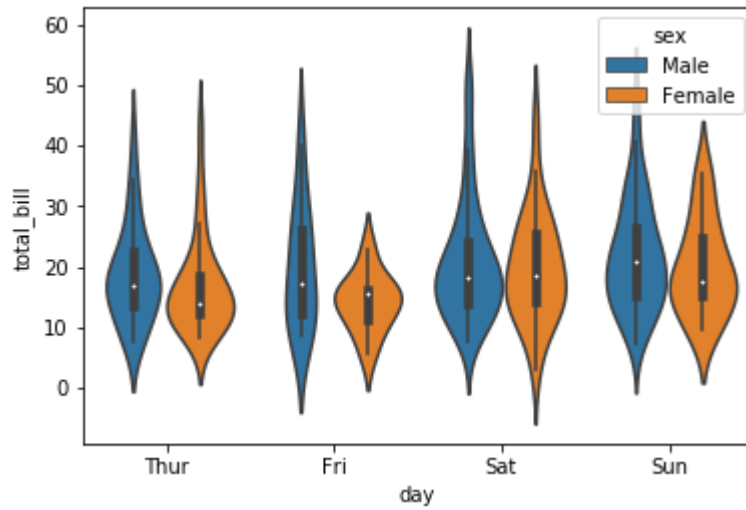
```
In [8]: sns.boxplot(x='day',y='total_bill',data=tips,hue='smoker')
```

```
Out[8]: <matplotlib.axes._subplots.AxesSubplot at 0xaa97278>
```



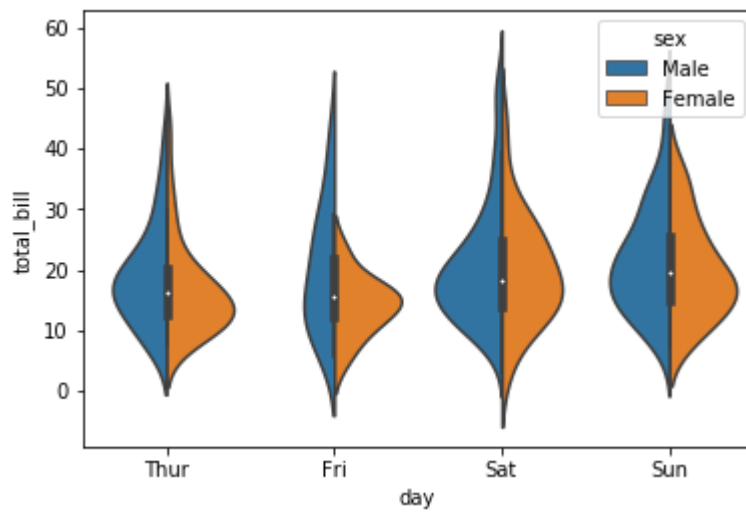
```
In [10]: sns.violinplot(x='day',y='total_bill',data=tips,hue='sex')
```

```
Out[10]: <matplotlib.axes._subplots.AxesSubplot at 0xac92e10>
```



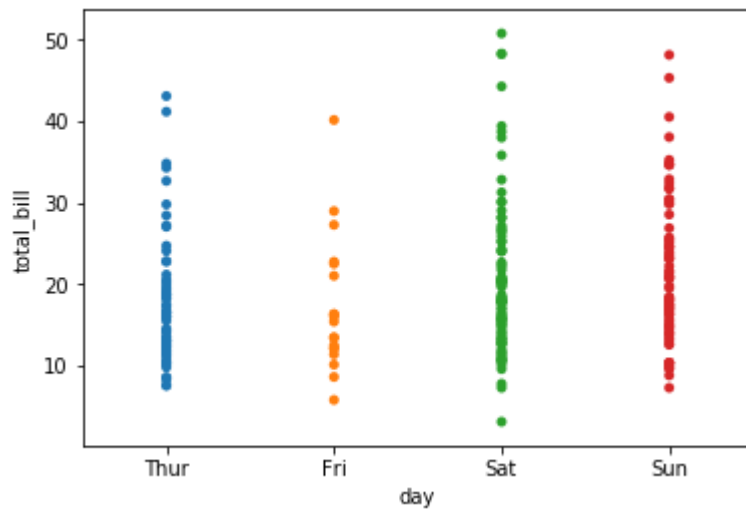
```
In [11]: sns.violinplot(x='day',y='total_bill',data=tips,hue='sex',split=True)
```

```
Out[11]: <matplotlib.axes._subplots.AxesSubplot at 0xad35320>
```



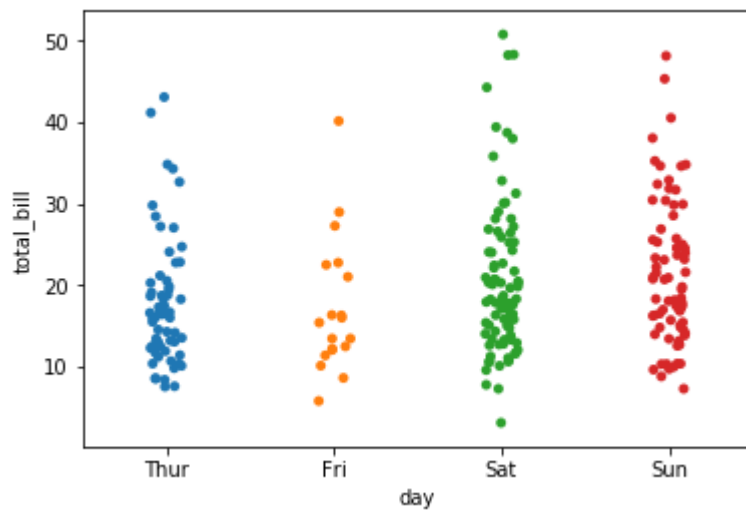
```
In [16]: sns.stripplot(x='day',y='total_bill',data=tips)
```

```
Out[16]: <matplotlib.axes._subplots.AxesSubplot at 0xb0ce898>
```



```
In [15]: sns.stripplot(x='day',y='total_bill',data=tips,jitter=True)
```

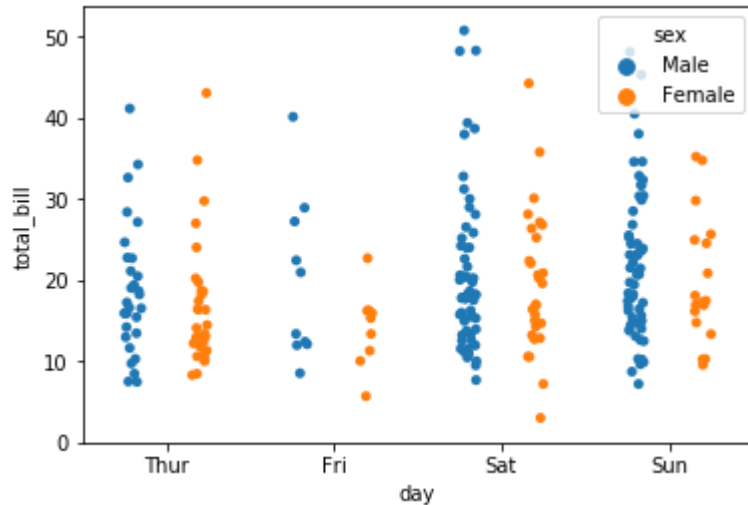
```
Out[15]: <matplotlib.axes._subplots.AxesSubplot at 0xb08bf98>
```



```
In [17]: sns.stripplot(x='day',y='total_bill',data=tips,jitter=True,hue='sex',split=True)
```

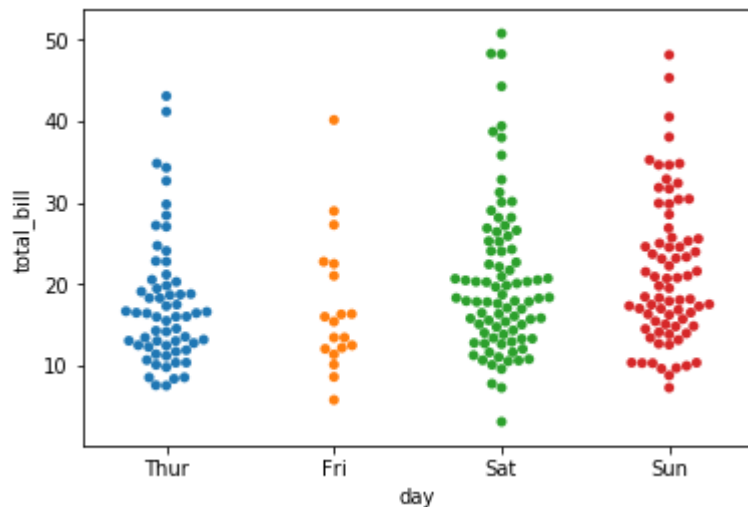
C:\Users\q21\Anaconda3\lib\site-packages\seaborn\categorical.py:2586: UserWarning: The `split` parameter has been renamed to `dodge`.
warnings.warn(msg, UserWarning)

Out[17]: <matplotlib.axes._subplots.AxesSubplot at 0xb11de10>



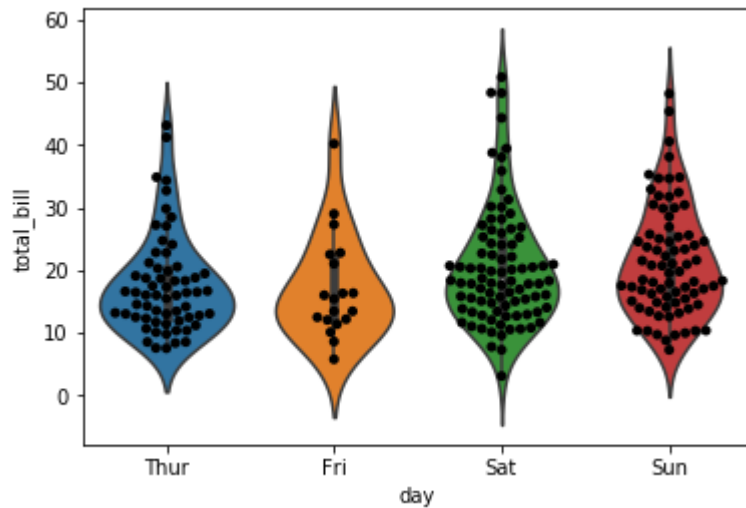
```
In [18]: sns.swarmplot(x='day',y='total_bill',data=tips)
```

Out[18]: <matplotlib.axes._subplots.AxesSubplot at 0xb1cbeb8>



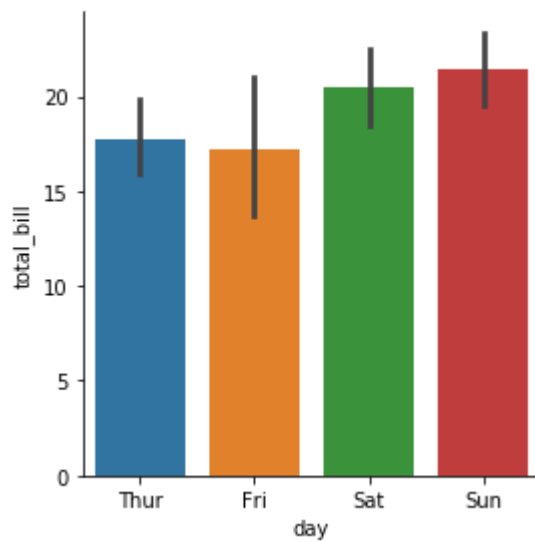
```
In [19]: sns.violinplot(x='day',y='total_bill',data=tips)  
sns.swarmplot(x='day',y='total_bill',data=tips,color='black')
```

Out[19]: <matplotlib.axes._subplots.AxesSubplot at 0xb228c18>



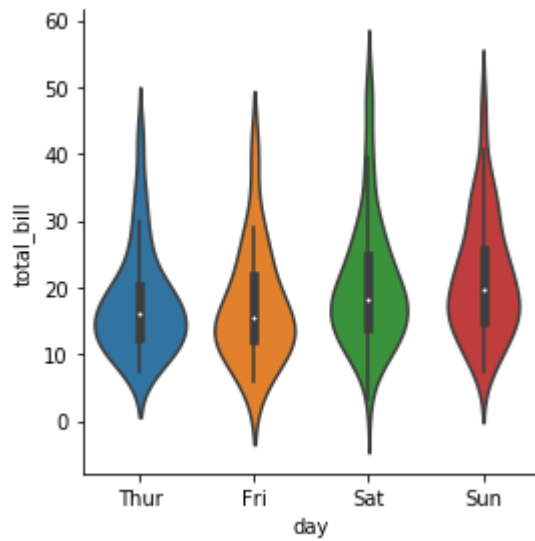
```
In [21]: sns.factorplot(x='day',y='total_bill',data=tips,kind='bar')
```

Out[21]: <seaborn.axisgrid.FacetGrid at 0xb11d588>



```
In [22]: sns.factorplot(x='day',y='total_bill',data=tips,kind='violin')
```

```
Out[22]: <seaborn.axisgrid.FacetGrid at 0xb34fb38>
```



```
In [ ]:
```