Name : - Sandeep Sharma

Date : - 9/14/2020

Seaborn

Seaborn is library in python which is used for creating beautiful graphs, plots and statistical data visualization. Seaborn library is built on top of the Matplotlib library. Seaborn turns out to be very effective during data exploration. ¶

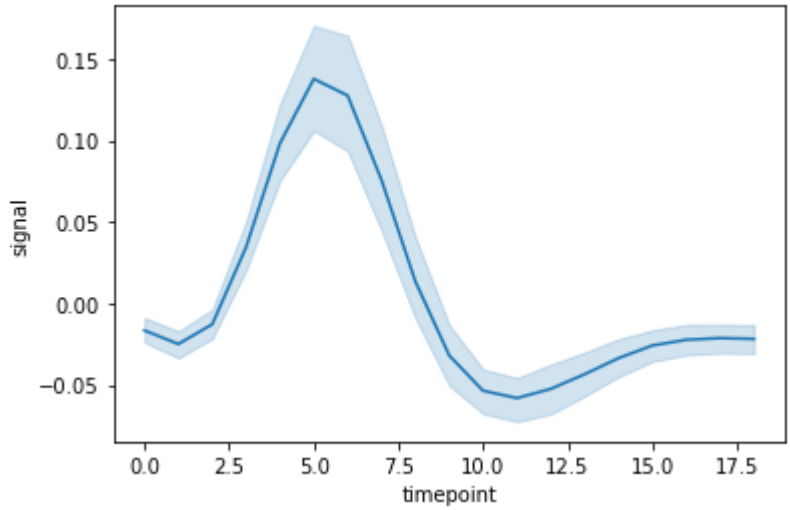
In [2]:
```
import seaborn as sns
import matplotlib.pyplot as plt
%matplotlib inline
```

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

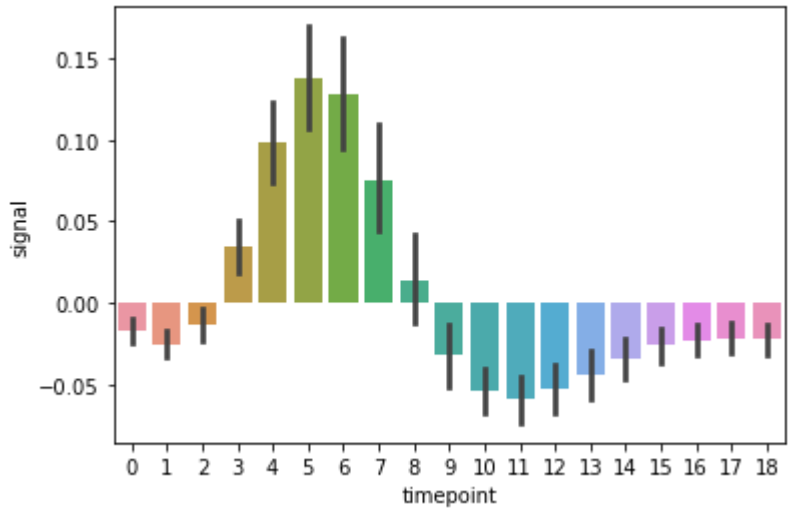
Out[3]:

	subject	timepoint	event	region	signal
0	s13	18	stim	parietal	-0.017552
1	s5	14	stim	parietal	-0.080883
2	s12	18	stim	parietal	-0.081033
3	s11	18	stim	parietal	-0.046134
4	s10	18	stim	parietal	-0.037970

In [4]:
```
sns.lineplot(x="timepoint",y="signal",data=fmri)
plt.show()
```



In [5]:
```
sns.barplot(x="timepoint",y="signal",data=fmri)
plt.show()
```



In [6]:
```
# With another builtin dataset
tips = sns.load_dataset('tips')
```

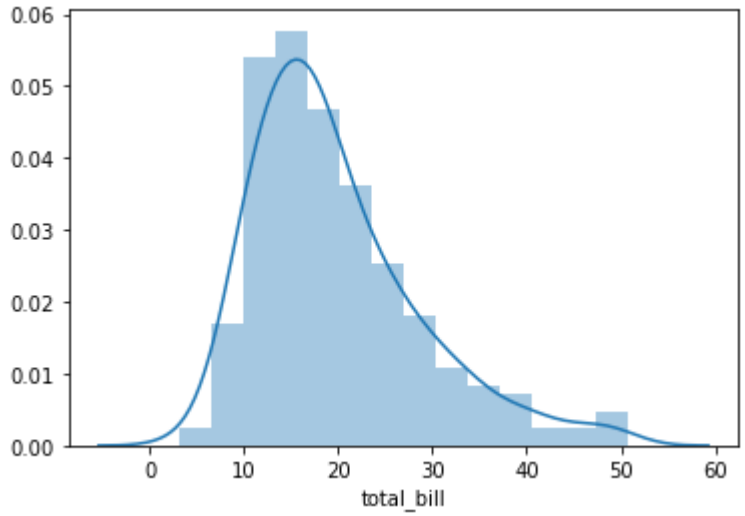
In [7]:
```
tips.head()
```

Out[7]:

	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

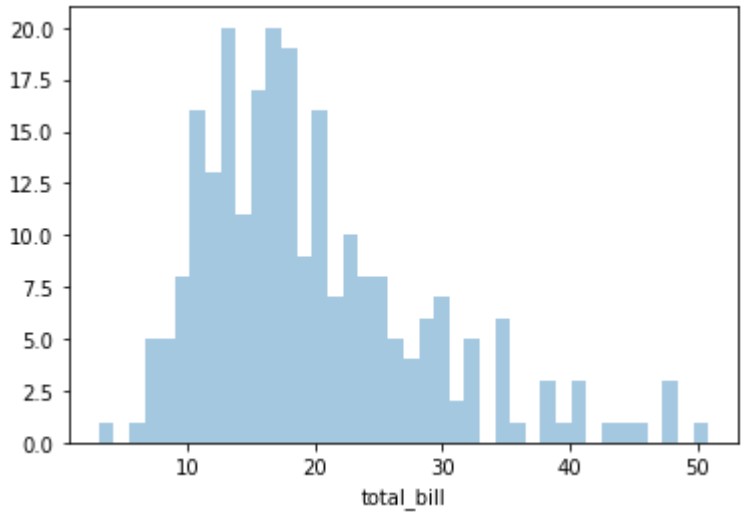
In [8]:
```
# distplot
sns.distplot(tips['total_bill'])
```

Out[8]: <matplotlib.axes._subplots.AxesSubplot at 0x28346494b80>



In [9]:
```
sns.distplot(tips['total_bill'],kde=False,bins=40)
```

Out[9]: <matplotlib.axes._subplots.AxesSubplot at 0x2834655f250>

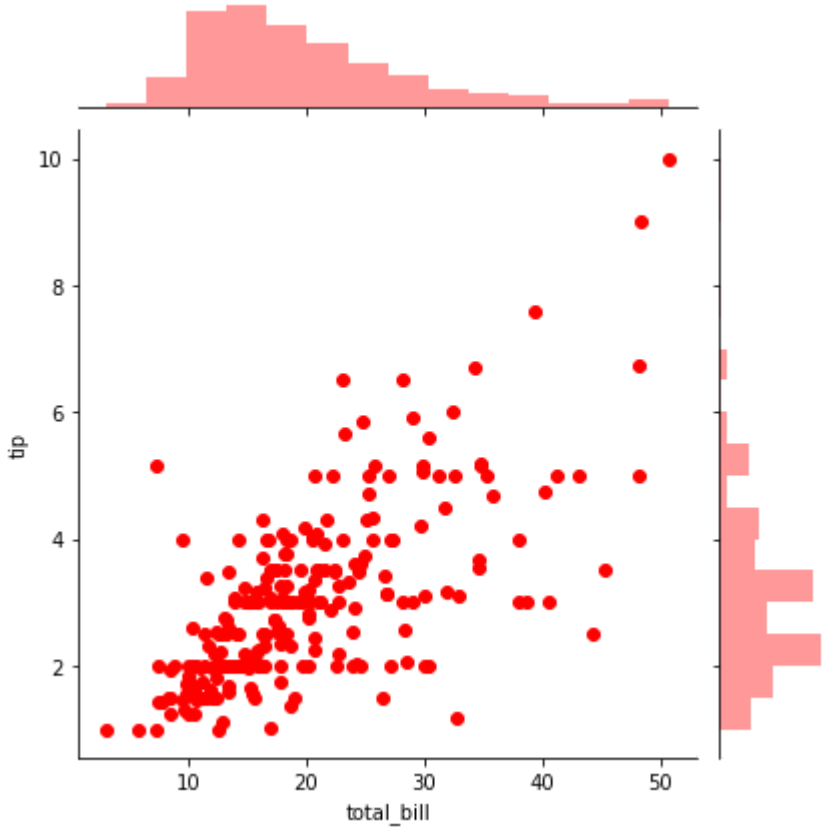


Jointplot

jointplot() allows us to basically match up two distplots for bivariate data

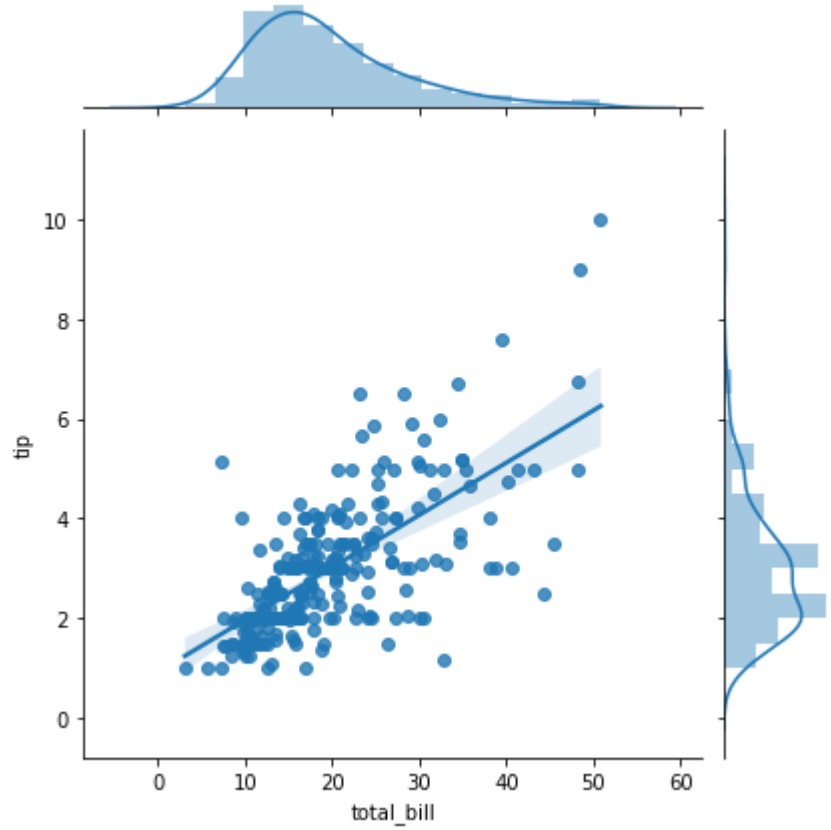
In [10]:
```
sns.jointplot(x='total_bill',y='tip',data=tips,kind='scatter',color='r')
```

Out[10]:
```
<seaborn.axisgrid.JointGrid at 0x28346636e80>
```



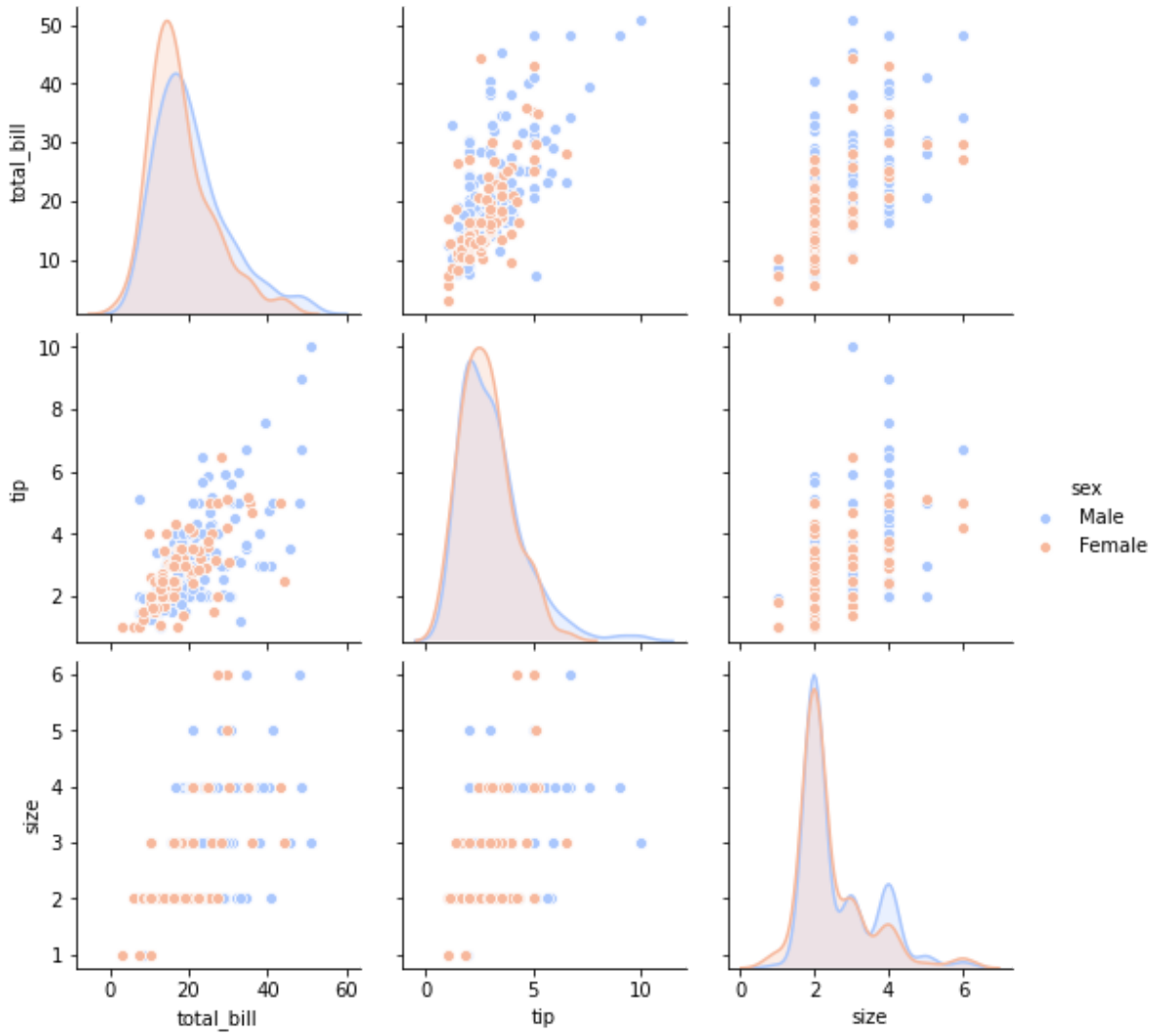
In [11]:
```
sns.jointplot(x='total_bill',y='tip',data=tips,kind='reg')
```

Out[11]: <seaborn.axisgrid.JointGrid at 0x2834674d850>



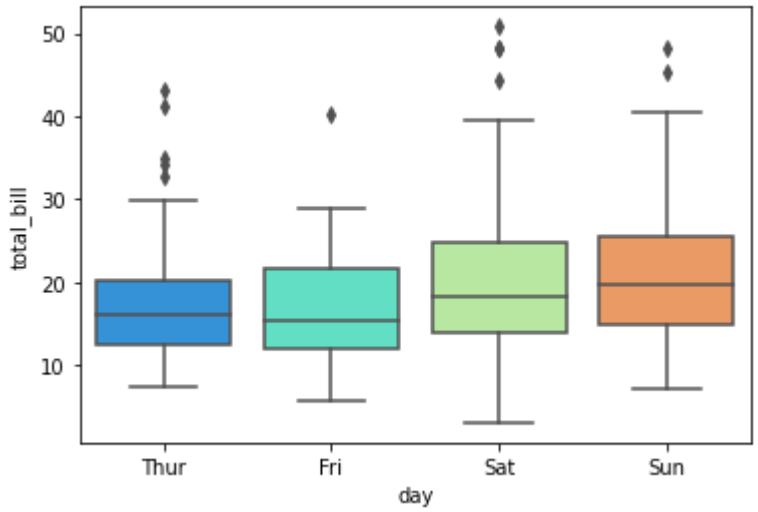
In [12]:
```
sns.pairplot(tips,hue='sex',palette='coolwarm')
```

Out[12]:
```
<seaborn.axisgrid.PairGrid at 0x2834687f670>
```



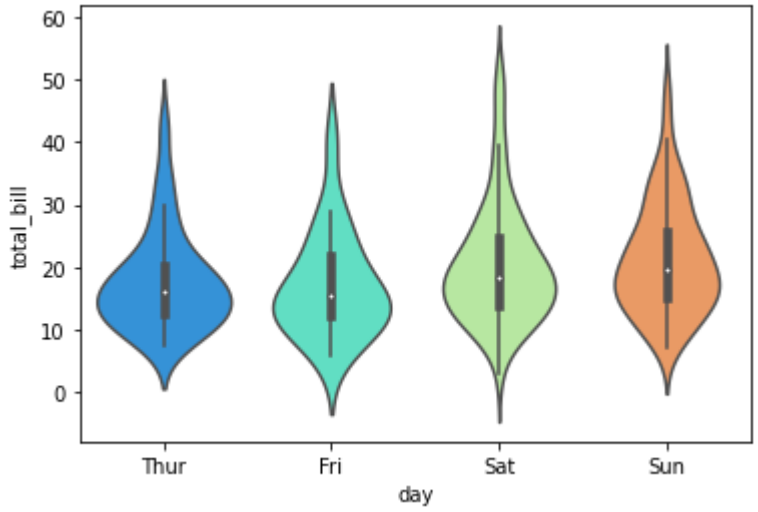
In [13]:
```
# Boxplot
sns.boxplot(x="day", y="total_bill", data=tips,palette='rainbow')
```

Out[13]: <matplotlib.axes._subplots.AxesSubplot at 0x28346d65700>



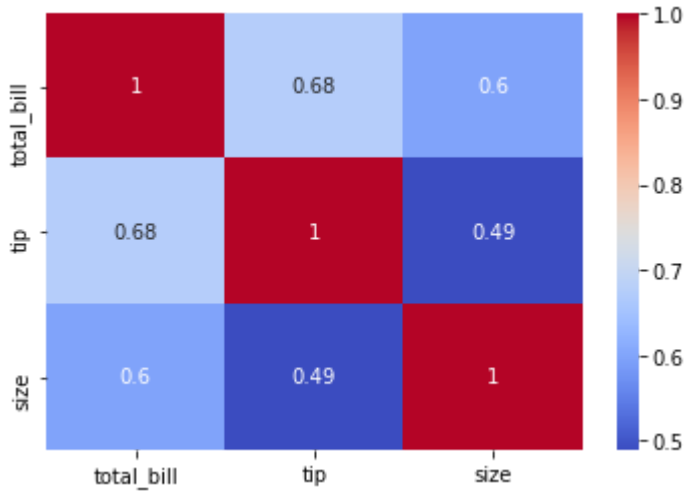
In [14]:
```
# Violin Plot
sns.violinplot(x="day", y="total_bill", data=tips,palette='rainbow')
```

Out[14]: <matplotlib.axes._subplots.AxesSubplot at 0x28346f32c40>



In [15]:
```
sns.heatmap(tips.corr(),cmap='coolwarm',annot=True)
```

Out[15]:
```
<matplotlib.axes._subplots.AxesSubplot at 0x28348fd4520>
```



In [16]:
```
sns.lmplot(x="total_bill", y="tip", row="sex", col="time",data=tips)
```

Out[16]:
```
<seaborn.axisgrid.FacetGrid at 0x2834909bac0>
```