

```
In [12]: import warnings
warnings.filterwarnings("ignore", category=FutureWarning)
```

```
In [13]: import seaborn as sns
```

```
In [14]: sns.get_dataset_names()
```

```
Out[14]: ['anagrams',
'anscombe',
'attention',
'brain_networks',
'car_crashes',
'diamonds',
'dots',
'dowjones',
'exercise',
'flights',
'fmri',
'geyser',
'glue',
'healthexp',
'iris',
'mpg',
'penguins',
'planets',
'seaice',
'taxis',
'tips',
'titanic']
```

```
In [15]: tips = sns.load_dataset("tips")
tips.head()
```

```
Out[15]:
```

	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 [16]: titanic = sns.load_dataset("titanic")
titanic.head()
```

```
Out[16]:
```

	survived	pclass	sex	age	sibsp	parch	fare	embarked	class	who	adult_male	deck	embark_town	alive	alone
0	0	3	male	22.0	1	0	7.2500	S	Third	man	True	NaN	Southampton	no	False
1	1	1	female	38.0	1	0	71.2833	C	First	woman	False	C	Cherbourg	yes	False
2	1	3	female	26.0	0	0	7.9250	S	Third	woman	False	NaN	Southampton	yes	True
3	1	1	female	35.0	1	0	53.1000	S	First	woman	False	C	Southampton	yes	False
4	0	3	male	35.0	0	0	8.0500	S	Third	man	True	NaN	Southampton	no	True

```
In [17]: tips
```

```
Out[17]:
```

	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
...
239	29.03	5.92	Male	No	Sat	Dinner	3
240	27.18	2.00	Female	Yes	Sat	Dinner	2
241	22.67	2.00	Male	Yes	Sat	Dinner	2
242	17.82	1.75	Male	No	Sat	Dinner	2
243	18.78	3.00	Female	No	Thur	Dinner	2

244 rows × 7 columns

```
In [18]: sns.set_theme(style="darkgrid")
```

```
In [19]: import pandas as pd
```

```
In [20]: tips.to_csv("tips_dataset.csv", index=False)
```

```
In [21]: import os  
os.getcwd()
```

```
Out[21]: 'C:\\Users\\JANHAVI\\NIT'
```

```
In [22]: import matplotlib.pyplot as plt
```

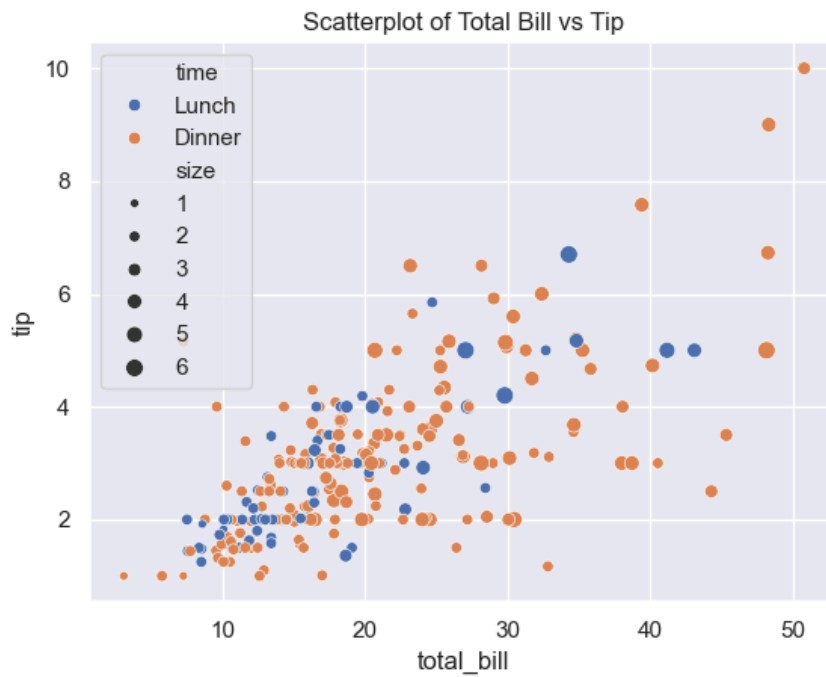
```
In [24]: plt.figure(figsize=(8, 6))
```

```
Out[24]: <Figure size 800x600 with 0 Axes>
```

<Figure size 800x600 with 0 Axes>

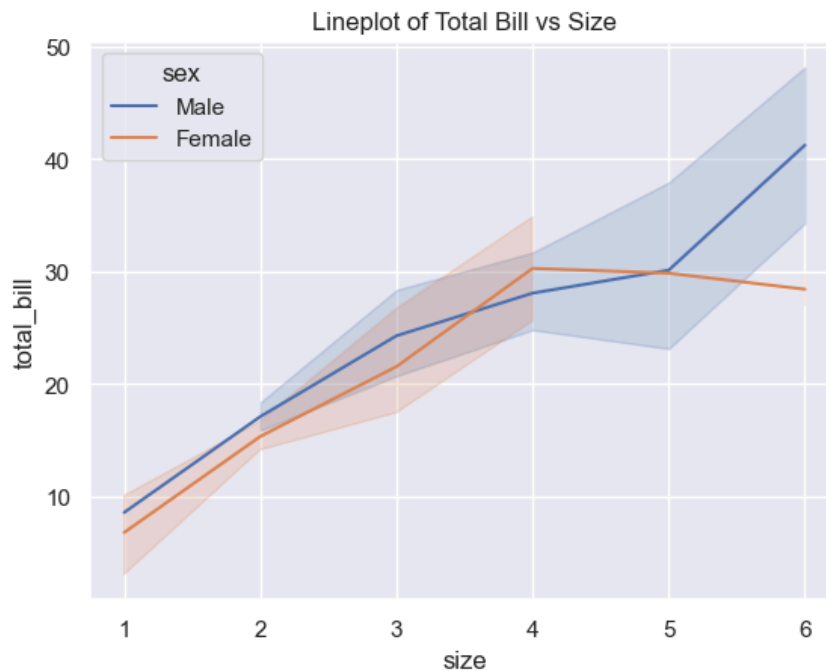
Scatter plot

```
In [26]: sns.scatterplot(data=tips, x="total_bill", y="tip", hue="time", size="size", palette="deep")  
plt.title("Scatterplot of Total Bill vs Tip")  
plt.show()
```

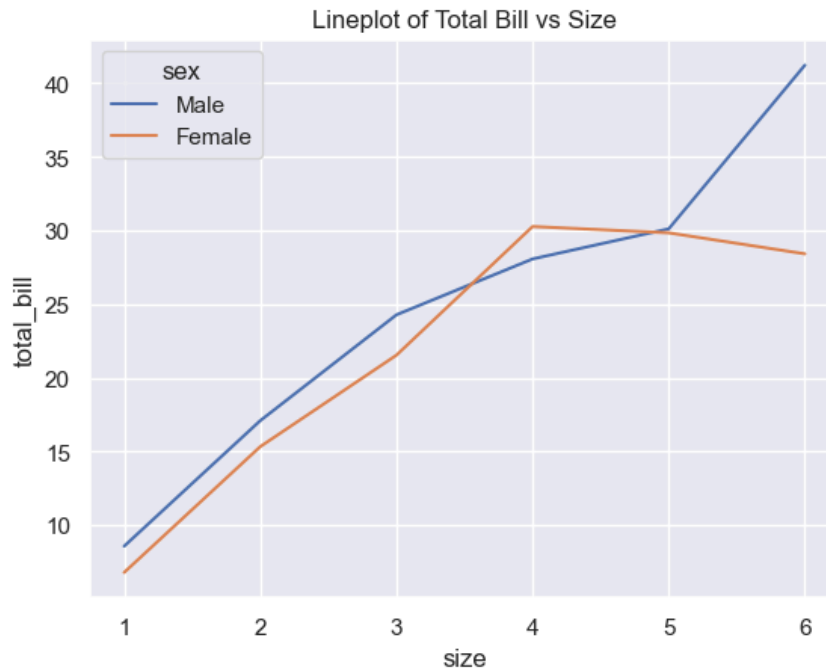


Line Plot

```
In [27]: sns.lineplot(data=tips, x='size', y='total_bill', hue='sex', markers='o')  
plt.title("Lineplot of Total Bill vs Size")  
plt.show()
```



```
In [28]: sns.lineplot(data=tips, x='size', y='total_bill', hue='sex',ci=None, markers='o')
plt.title("Lineplot of Total Bill vs Size")
plt.show()
```

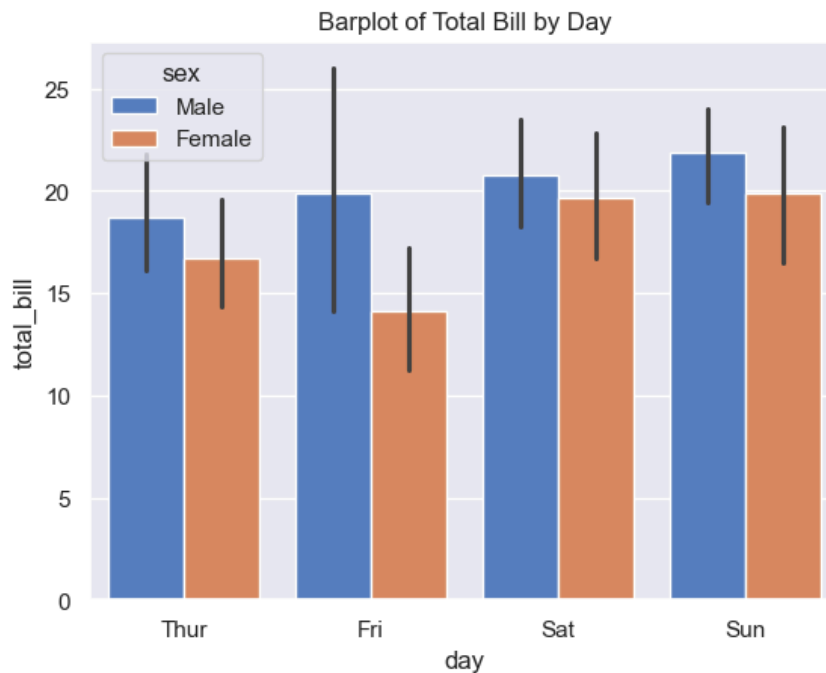


```
In [29]: tips.columns
```

```
Out[29]: Index(['total_bill', 'tip', 'sex', 'smoker', 'day', 'time', 'size'], dtype='object')
```

Bar Plot

```
In [30]: sns.barplot(data=tips, x='day', y='total_bill', hue='sex',palette='muted')
plt.title("Barplot of Total Bill by Day")
plt.show()
```

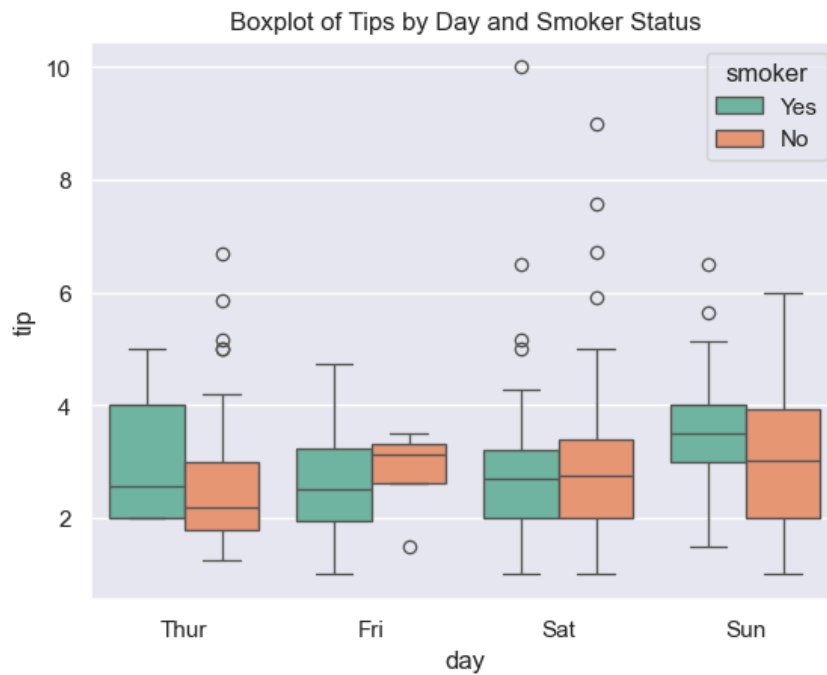


```
In [31]: tips.columns
```

```
Out[31]: Index(['total_bill', 'tip', 'sex', 'smoker', 'day', 'time', 'size'], dtype='object')
```

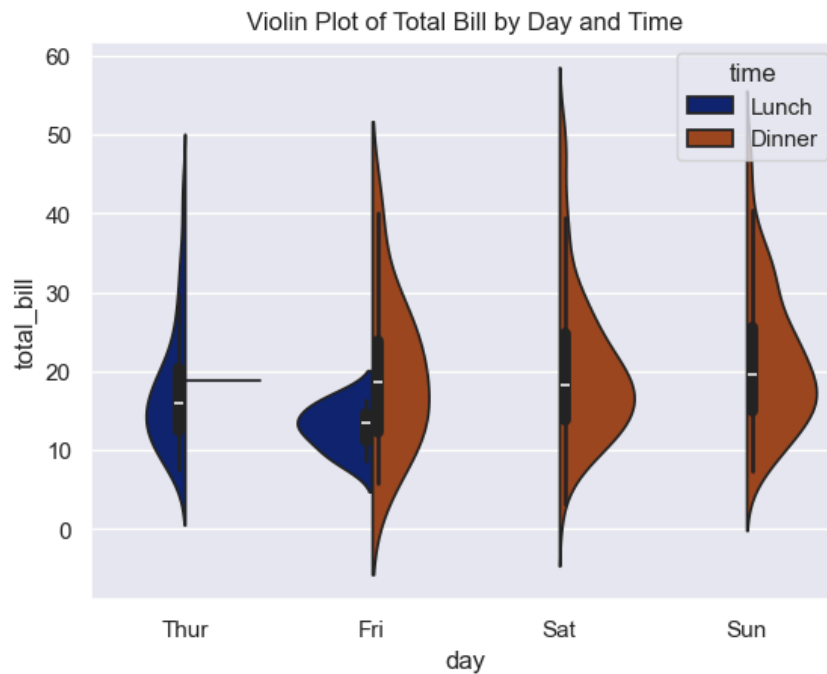
Boxplot

```
In [36]: sns.boxplot(data=tips, x='day', y='tip', hue='smoker', palette='Set2')
plt.title("Boxplot of Tips by Day and Smoker Status")
plt.show()
```



Violin Plot

```
In [37]: sns.violinplot(data=tips, x='day', y='total_bill', hue='time', split=True, palette='dark')
plt.title("Violin Plot of Total Bill by Day and Time")
plt.show()
```

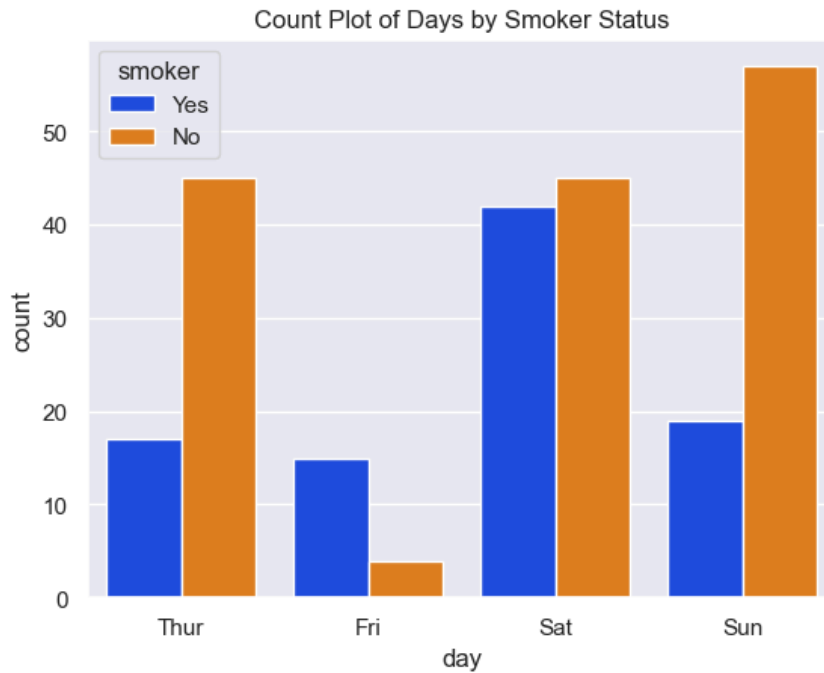


```
In [39]: tips.columns
```

```
Out[39]: Index(['total_bill', 'tip', 'sex', 'smoker', 'day', 'time', 'size'], dtype='object')
```

Count Plot

```
In [43]: sns.countplot(data=tips, x='day', hue='smoker', palette='bright')
plt.title("Count Plot of Days by Smoker Status")
plt.show()
```



```
In [41]: tips.columns
```

```
Out[41]: Index(['total_bill', 'tip', 'sex', 'smoker', 'day', 'time', 'size'], dtype='object')
```

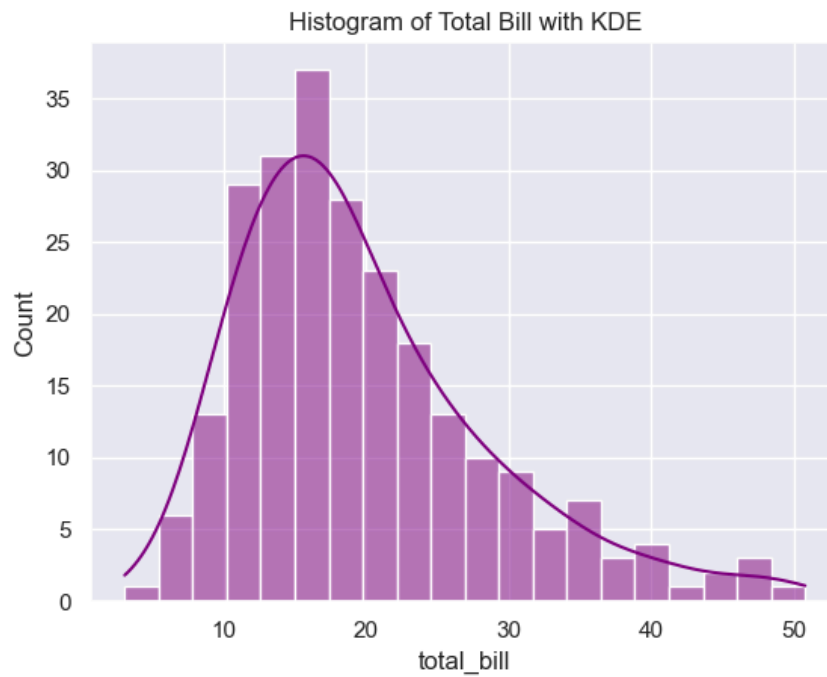
Regression Plot

```
In [45]: sns.regplot(data=tips, x='total_bill', y='tip', scatter_kws={'s':50}, line_kws={'color':'green'})
plt.title("Regression Plot of Total Bill vs Tip")
plt.show()
```



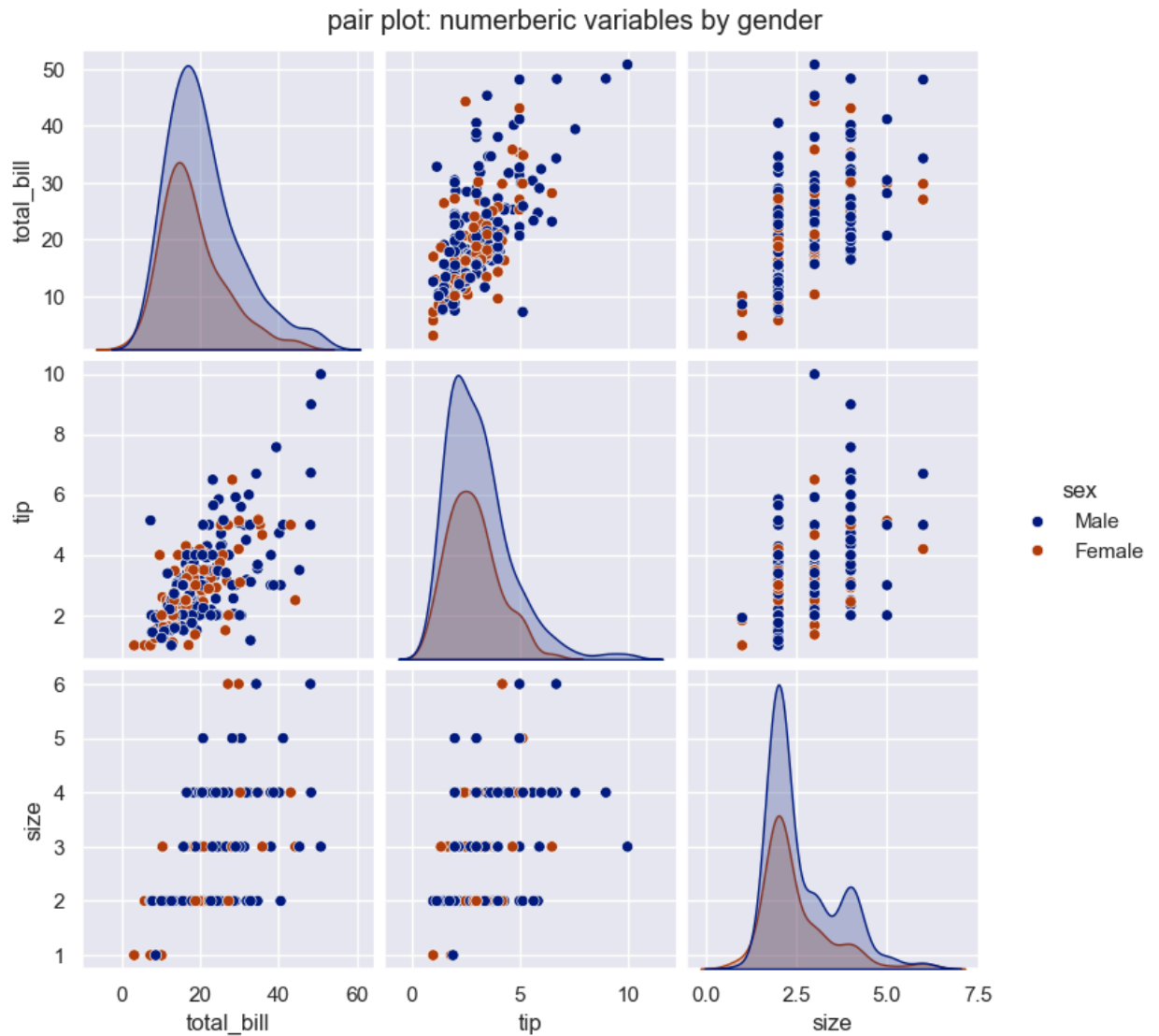
Histogram

```
In [46]: sns.histplot(data=tips, x='total_bill', bins=20, kde=True, color='Purple')  
plt.title("Histogram of Total Bill with KDE")  
plt.show()
```



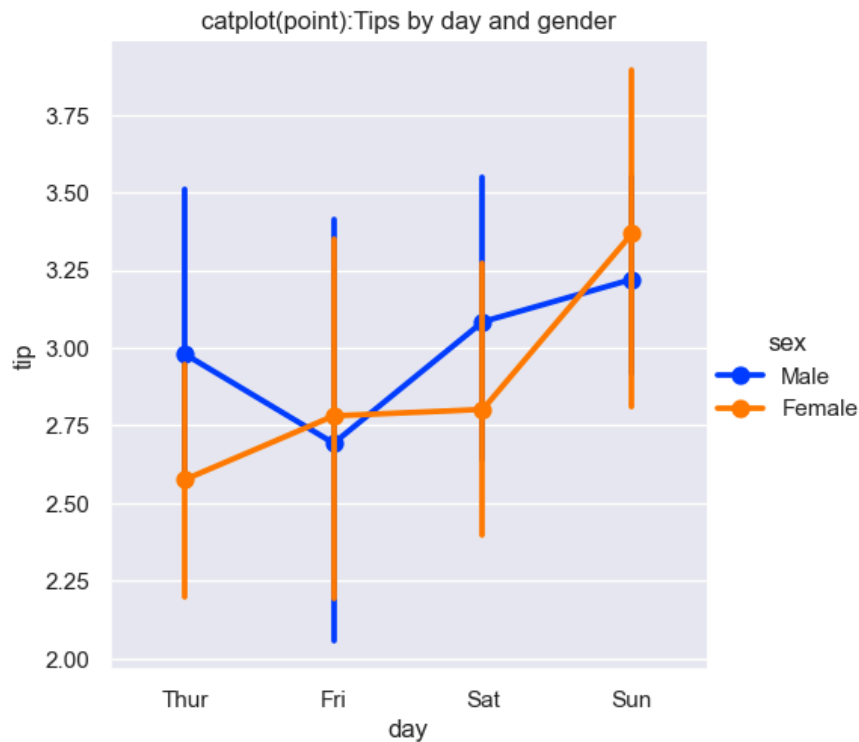
Pairplot

```
In [47]: sns.pairplot(tips, hue='sex', vars=["total_bill", "tip", "size"], palette='dark')
plt.suptitle("pair plot: numeric variables by gender", y=1.02)
plt.show()
```



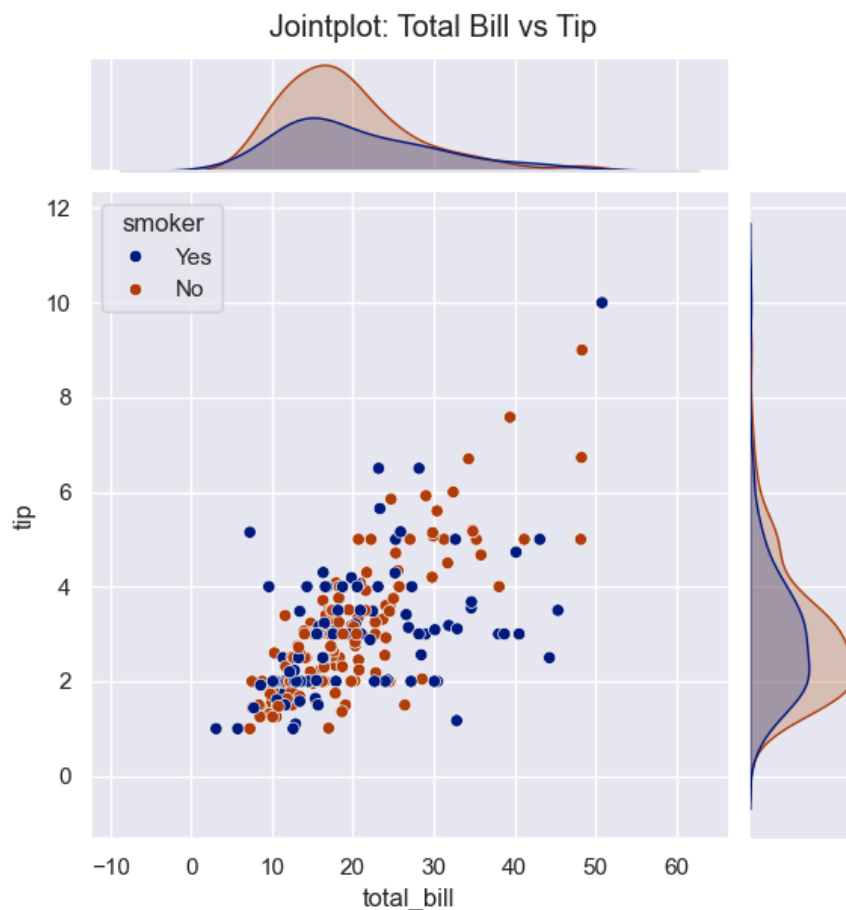
Catplot


```
In [48]: sns.catplot(data=tips, x='day', y='tip', hue='sex', kind='point', palette='bright')
plt.title("catplot(point):Tips by day and gender")
plt.show()
```



Jointplot

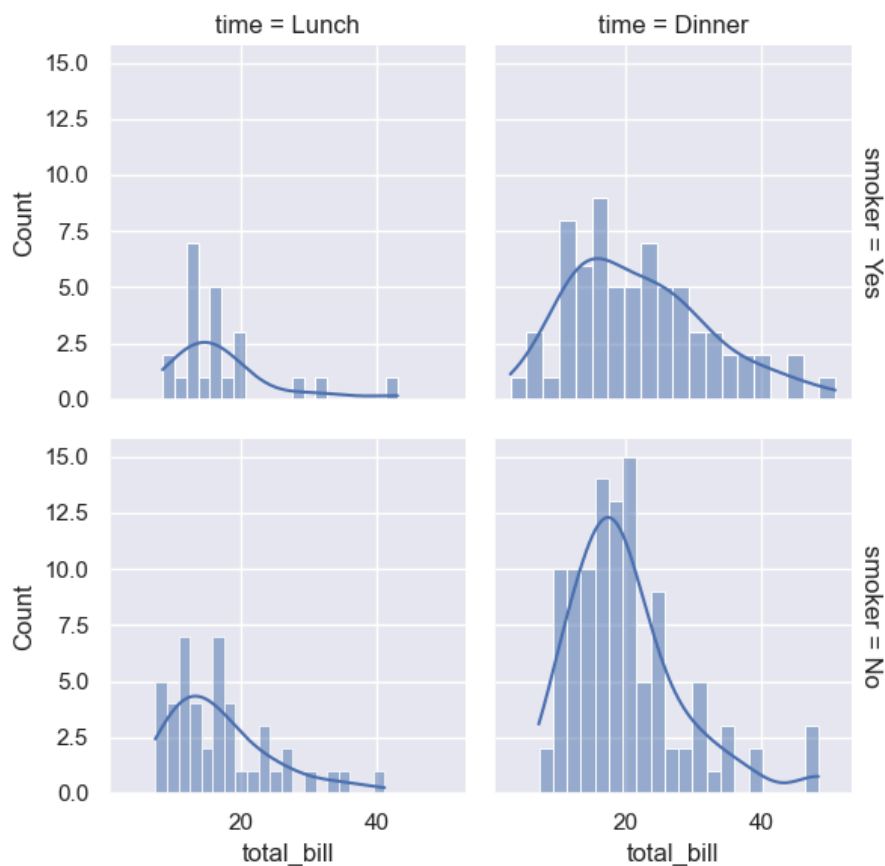
```
In [49]: sns.jointplot(data=tips, x='total_bill', y='tip', kind='scatter', hue='smoker', color='purple', palette='dark')
plt.suptitle("Jointplot: Total Bill vs Tip", y=1.02)
plt.show()
```



Facetgrid

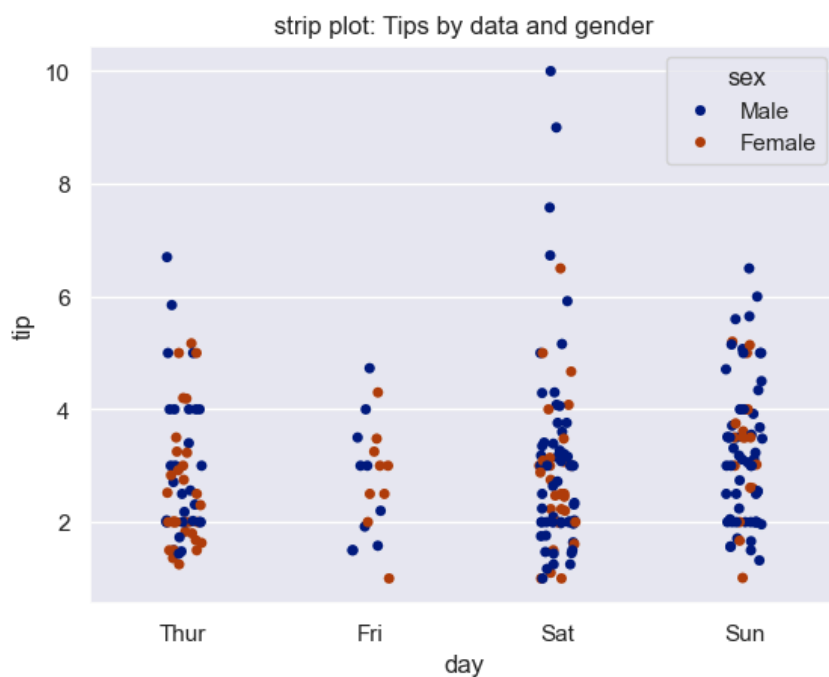
```
In [50]: g = sns.FacetGrid(tips, col='time', row='smoker', margin_titles=True).map(sns.histplot, 'total_bill', bins=20)
```

```
Out[50]: <seaborn.axisgrid.FacetGrid at 0x175fae82ad0>
```



Strip Plot

```
In [51]: sns.stripplot(data=tips, x='day', y='tip', hue='sex', jitter=True, palette='dark')
plt.title("strip plot: Tips by data and gender")
plt.show()
```



KDE Plot

```
In [53]: sns.kdeplot(data=tips, x='total_bill', hue='sex', fill=True, palette='dark')  
plt.title("kde plot:Total bill density by gender")  
plt.show()
```

