

```
import pandas as pd
import seaborn as sns
```

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

```
tips.head()
```

	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

```
titanic = pd.read_csv('train.csv')
```

```
flights = sns.load_dataset('flights')
```

```
flights.head()
```

	year	month	passengers
0	1949	January	112
1	1949	February	118
2	1949	March	132
3	1949	April	129
4	1949	May	121

```
iris = sns.load_dataset('iris')
```


```
iris
```

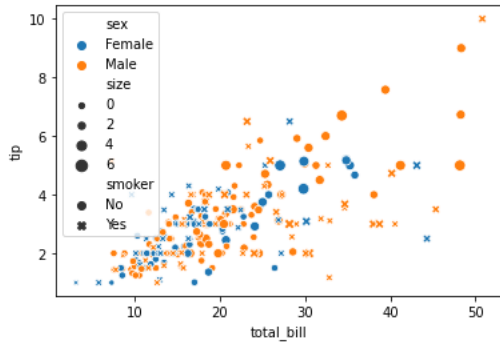
	sepal_length	sepal_width	petal_length	petal_width	species
0	5.1	3.5	1.4	0.2	setosa
1	4.9	3.0	1.4	0.2	setosa
2	4.7	3.2	1.3	0.2	setosa
3	4.6	3.1	1.5	0.2	setosa
4	5.0	3.6	1.4	0.2	setosa
...	...	...	...	...	...
145	6.7	3.0	5.2	2.3	virginica
146	6.3	2.5	5.0	1.9	virginica
147	6.5	3.0	5.2	2.0	virginica
148	6.2	3.4	5.4	2.3	virginica
149	5.9	3.0	5.1	1.8	virginica

150 rows × 5 columns

## ✓ 1. Scatterplot (Numerical - Numerical)


```
sns.scatterplot(tips['total_bill'],tips['tip'],hue=df['sex'],style=df['smoker'],size=df['size'])
```

 <matplotlib.axes.\_subplots.AxesSubplot at 0x2a91dc2bcd0>



## ✓ 2. Bar Plot (Numerical - Categorical)

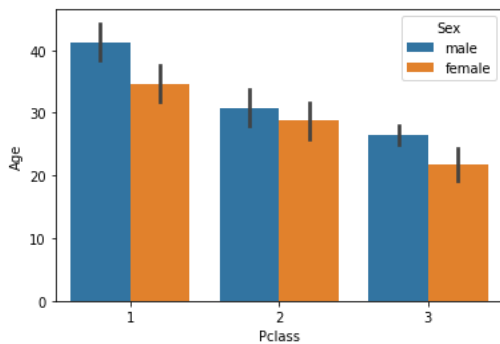
```
titanic.head()
```

 <matplotlib.axes.\_subplots.AxesSubplot at 0x2a91f2a3c70>

	PassengerId	Survived	Pclass	Name	Sex	Age	SibSp	Parch	Ticket	Fare	Cabin	Embarked
0	1	0	3	Braund, Mr. Owen Harris	male	22.0	1	0	A/5 21171	7.2500	NaN	S
1	2	1	1	Cumings, Mrs. John Bradley (Florence Briggs Th...	female	38.0	1	0	PC 17599	71.2833	C85	C
2	3	1	3	Heikkinen, Miss. Laina	female	26.0	0	0	STON/O2. 3101282	7.9250	NaN	S
3	4	1	1	Futrelle, Mrs. Jacques Heath (Lily May Peel)	female	35.0	1	0	113803	53.1000	C123	S

```
sns.barplot(titanic['Pclass'],titanic['Age'],hue=titanic['Sex'])
```

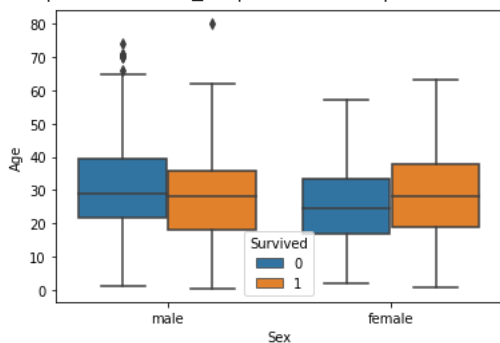
 <matplotlib.axes.\_subplots.AxesSubplot at 0x2a91f2a3c70>



## ✓ 3. Box Plot (Numerical - Categorical)


```
sns.boxplot(titanic['Sex'],titanic['Age'],hue=titanic['Survived'])
```

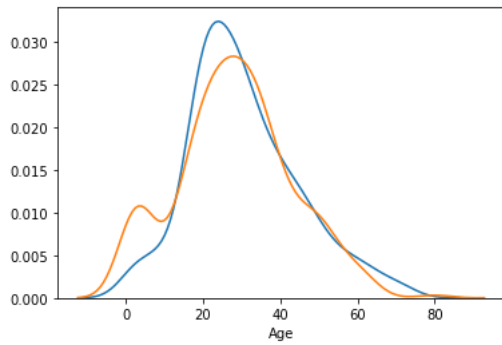
 <matplotlib.axes.\_subplots.AxesSubplot at 0x2a91f382310>



## ✓ 4. Distplot (Numerical - Categorical)


```
sns.distplot(titanic[titanic['Survived']==0]['Age'],hist=False)
sns.distplot(titanic[titanic['Survived']==1]['Age'],hist=False)
```

 <matplotlib.axes.\_subplots.AxesSubplot at 0x2a91f51ceb0>



## 5. HeatMap (Categorical - Categorical)

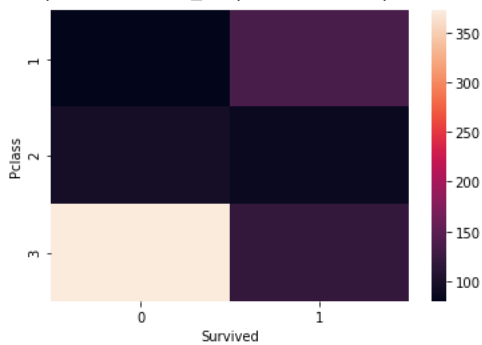
```
titanic.head(3)
```




	PassengerId	Survived	Pclass	Name	Sex	Age	SibSp	Parch	Ticket	Fare	Cabin	Embarked
0	1	0	3	Braund, Mr. Owen Harris	male	22.0	1	0	A/5 21171	7.2500	NaN	S
1	2	1	1	Cumings, Mrs. John Bradley (Florence Briggs Th...)	female	38.0	1	0	PC 17599	71.2833	C85	C
2	3	1	3	Heikkinen, Miss. Laina	female	26.0	0	0	STON/O2.	7.0000	NaN	S

```
sns.heatmap(pd.crosstab(titanic['Pclass'],titanic['Survived']))
```

 <matplotlib.axes.\_subplots.AxesSubplot at 0x2a91f6c5c10>




```
(titanic.groupby('Embarked').mean()['Survived']*100)
```

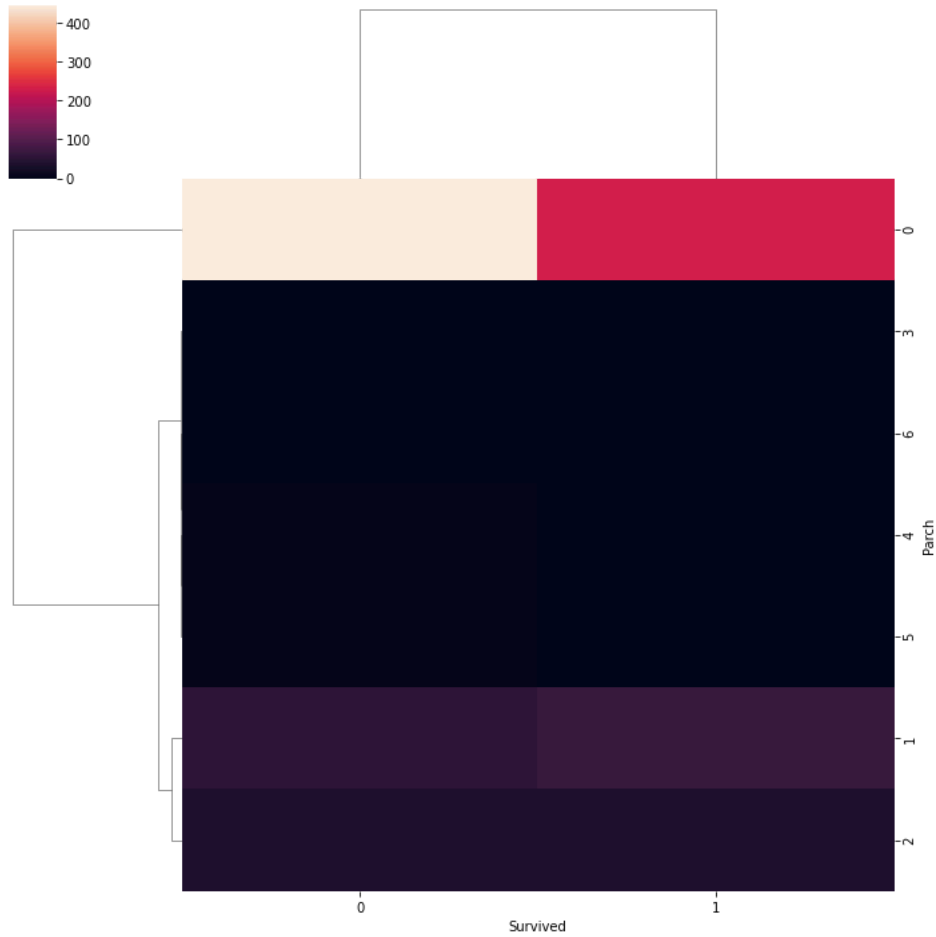


```
Embarked
C    55.357143
Q    38.961039
S    33.695652
Name: Survived, dtype: float64
```

## 6. ClusterMap (Categorical - Categorical)


```
sns.clustermap(pd.crosstab(titanic['Parch'],titanic['Survived']))
```

 <seaborn.matrix.ClusterGrid at 0x2a91e118bb0>




## 7. Pairplot

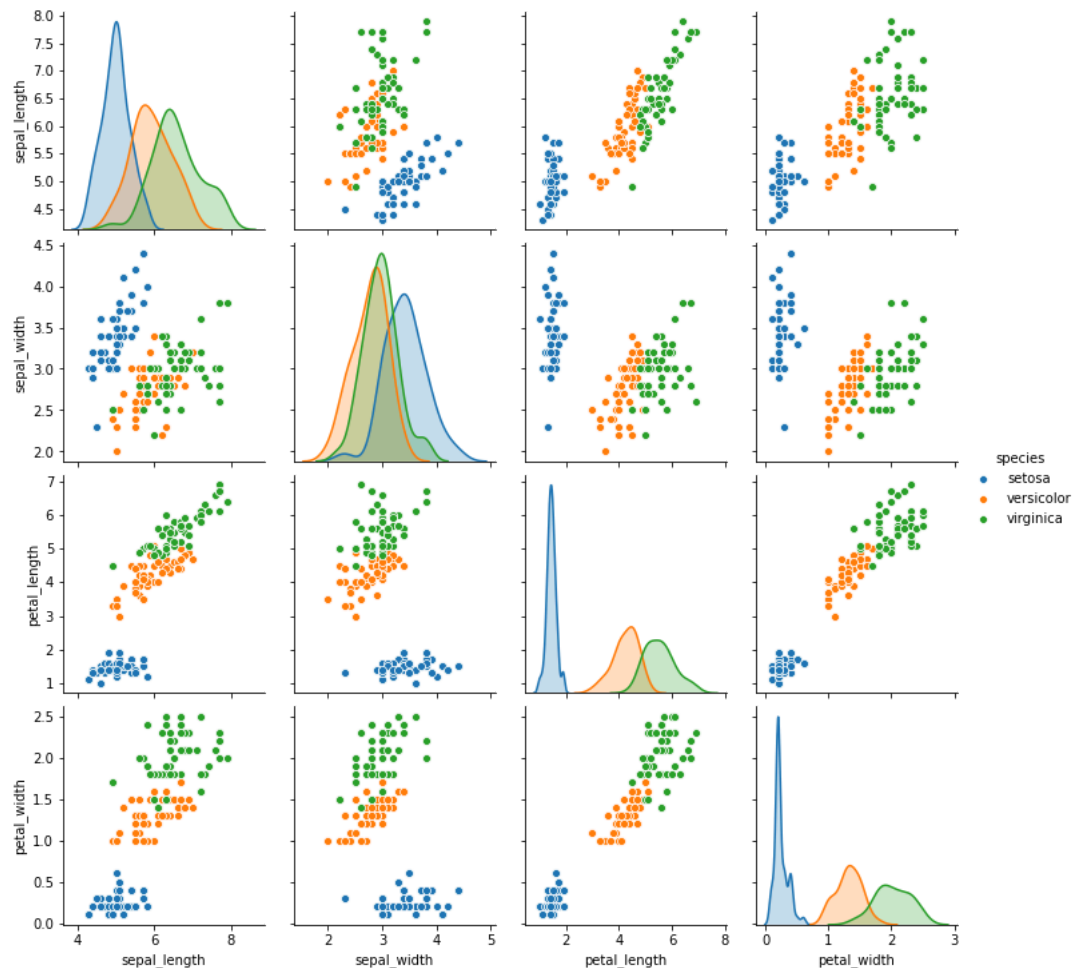
```
iris.head()
```



	sepal_length	sepal_width	petal_length	petal_width	species
0	5.1	3.5	1.4	0.2	setosa
1	4.9	3.0	1.4	0.2	setosa
2	4.7	3.2	1.3	0.2	setosa
3	4.6	3.1	1.5	0.2	setosa
4	5.0	3.6	1.4	0.2	setosa


```
sns.pairplot(iris,hue='species')
```

 <seaborn.axisgrid.PairGrid at 0x2a9209a4fa0>



## ✓ 8. Lineplot (Numerical - Numerical)

```
flights.head()
```

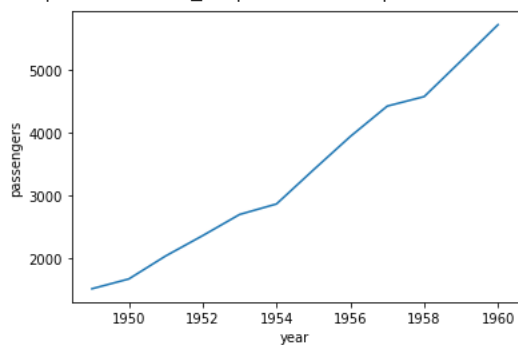


	year	month	passengers
0	1949	January	112
1	1949	February	118
2	1949	March	132
3	1949	April	129
4	1949	May	121

```
new = flights.groupby('year').sum().reset_index()
```

```
sns.lineplot(new['year'],new['passengers'])
```

 <matplotlib.axes.\_subplots.AxesSubplot at 0x2a92265c5e0>



```
flights
```



	year	month	passengers
0	1949	January	112
1	1949	February	118
2	1949	March	132
3	1949	April	129
4	1949	May	121
...	...	...	...
139	1960	August	606
140	1960	September	508
141	1960	October	461
142	1960	November	390
143	1960	December	432

144 rows x 3 columns

```
sns.clustermap(flights.pivot_table(values='passengers',index='month',columns='year'))
```



<seaborn.matrix.ClusterGrid at 0x2a9234173d0>

