

▼ Import Libraries

```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns
```

▼ Import Dataset

```
dataset = sns.load_dataset('titanic')
dataset.head()
```

	survived	pclass	sex	age	sibsp	parch	fare	embarked	class	who	adult_male	deck	embark_tow
0	0	3	male	22.0	1	0	7.2500	S	Third	man	True	NaN	Southampton
1	1	1	female	38.0	1	0	71.2833	C	First	woman	False	C	Cherbourg
2	1	3	female	26.0	0	0	7.9250	S	Third	woman	False	NaN	Southampton
3	1	1	female	35.0	1	0	53.1000	S	First	woman	False	C	Southampton
4	0	3	male	35.0	0	0	8.0500	S	Third	man	True	NaN	Southampton

▼ Distributed Plots

▼ (A) Distplot

```
import seaborn as sns
sns.distplot(x = dataset['age'], bins = 10)
```

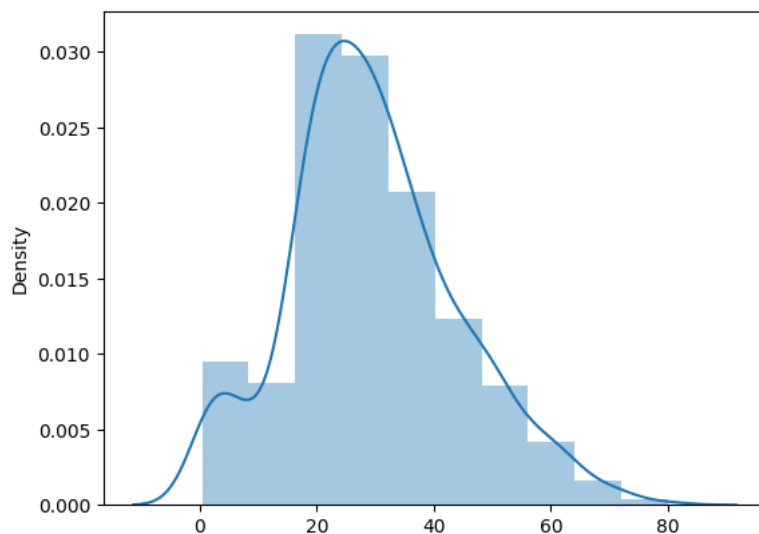
<ipython-input-3-fcf9ad376681>:2: UserWarning:

`distplot` is a deprecated function and will be removed in seaborn v0.14.0.

Please adapt your code to use either `displot` (a figure-level function with similar flexibility) or `histplot` (an axes-level function for histograms).

For a guide to updating your code to use the new functions, please see <https://gist.github.com/mwaskom/de44147ed2974457ad6372750bbe5751>

```
sns.distplot(x = dataset['age'], bins = 10)
<Axes: ylabel='Density'>
```



```
sns.distplot(dataset['age'], bins = 10, kde=False)
```

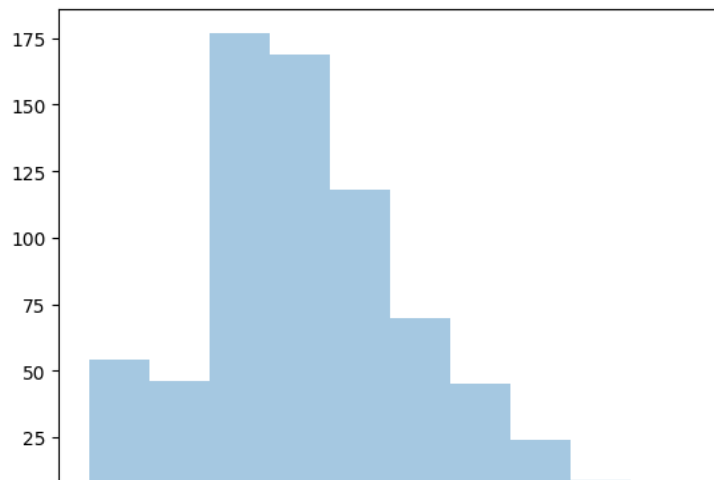
```
<ipython-input-4-f2dca48d8ca1>:1: UserWarning:
```

```
`distplot` is a deprecated function and will be removed in seaborn v0.14.0.
```

Please adapt your code to use either `displot` (a figure-level function with similar flexibility) or `histplot` (an axes-level function for histograms).

For a guide to updating your code to use the new functions, please see <https://gist.github.com/mwaskom/de44147ed2974457ad6372750bbe5751>

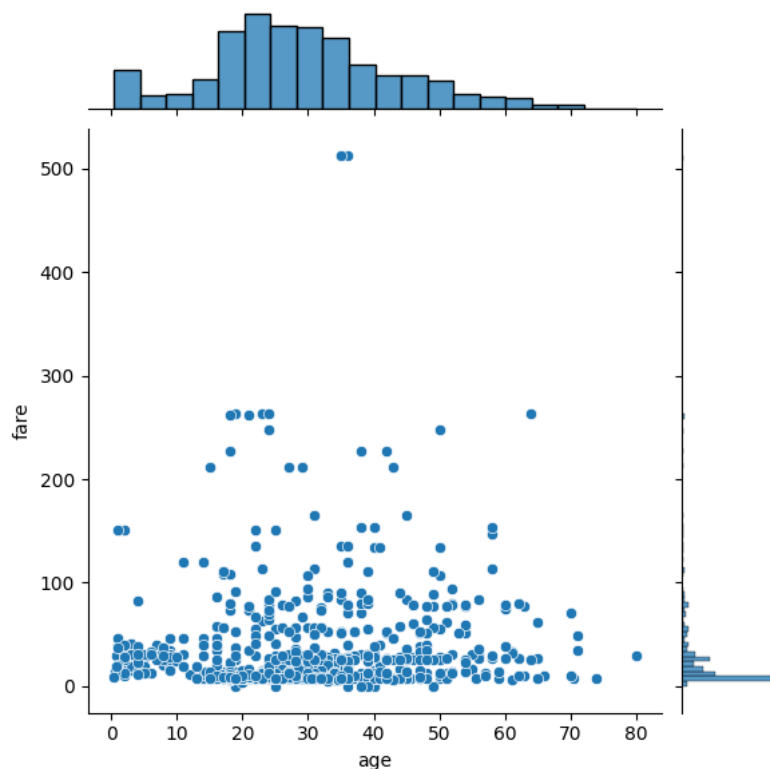
```
sns.distplot(dataset['age'], bins = 10, kde=False)
<Axes: xlabel='age'>
```



▼ (b) Joint Plot

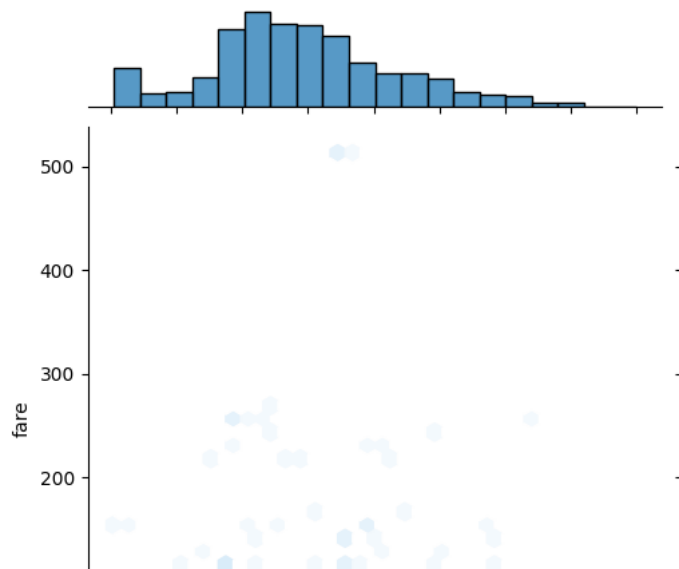
```
sns.jointplot(x = dataset['age'], y = dataset['fare'], kind =
'scatter')
```

```
<seaborn.axisgrid.JointGrid at 0x7f18c054ff10>
```



```
sns.jointplot(x = dataset['age'], y = dataset['fare'], kind = 'hex')
```

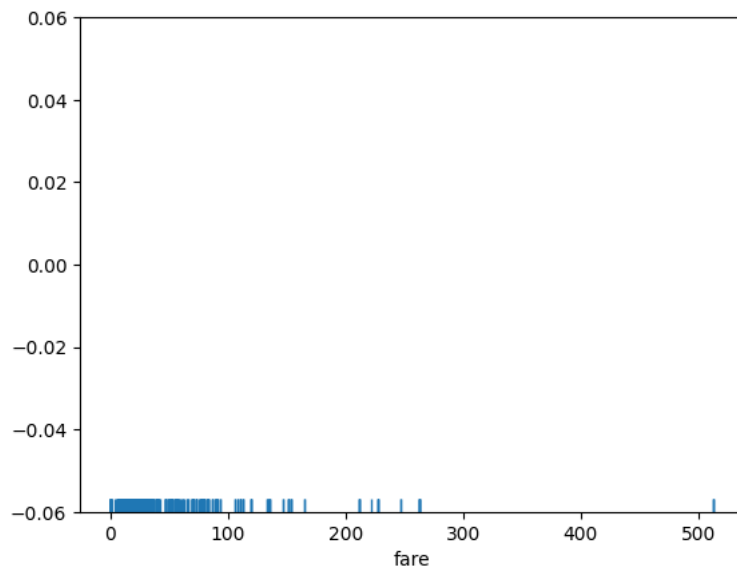
```
<seaborn.axisgrid.JointGrid at 0x7f188967d270>
```



▼ (C) Rug Plot

```
sns.rugplot(dataset['fare'])
```

```
<Axes: xlabel='fare'>
```

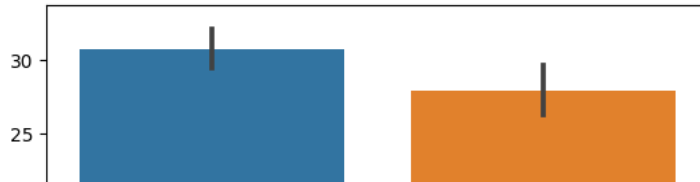


▼ Categorical Plots

▼ (A) Bar Plot

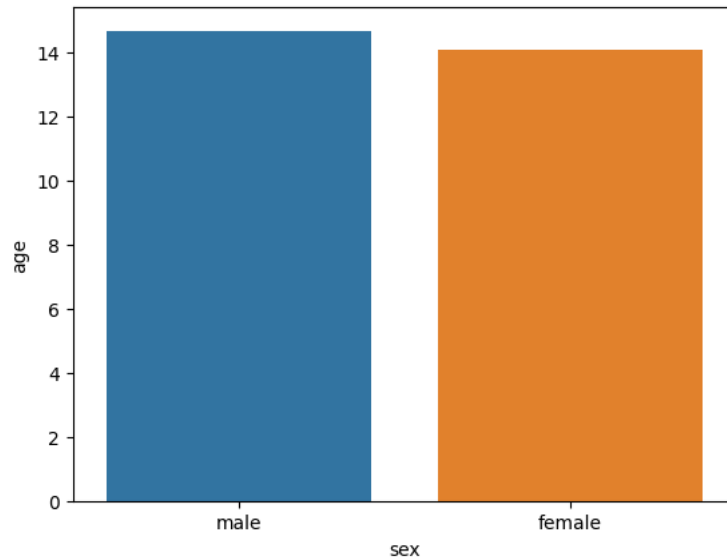
```
sns.barplot(x='sex', y='age', data=dataset)
```

<Axes: xlabel='sex', ylabel='age'>



```
sns.barplot(x='sex', y='age', data=dataset, estimator=np.std)
```

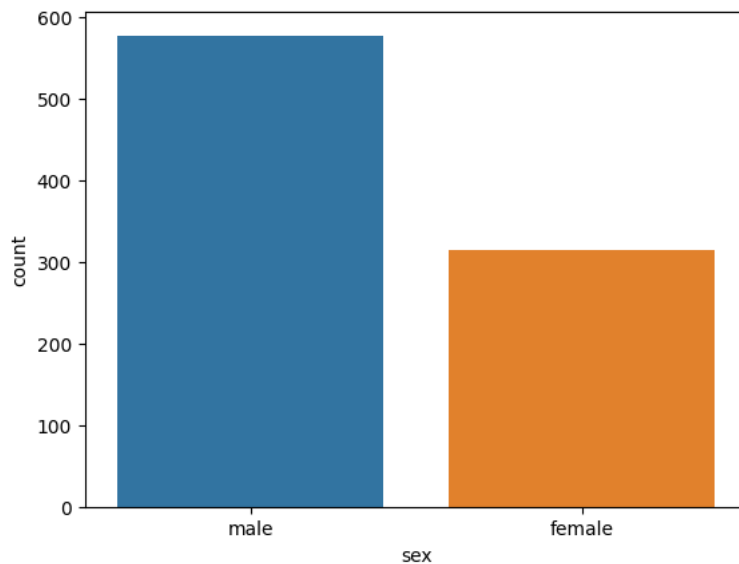
```
/usr/local/lib/python3.10/dist-packages/numpy/lib/nanfunctions.py:1560: RuntimeWarning: All-NaN slice encountered
r, k = function_base._ureduce(a,
/usr/local/lib/python3.10/dist-packages/numpy/lib/nanfunctions.py:1560: RuntimeWarning: All-NaN slice encountered
r, k = function_base._ureduce(a,
<Axes: xlabel='sex', ylabel='age'>
```



▼ (B) Count Plot

```
sns.countplot(x='sex', data=dataset)
```

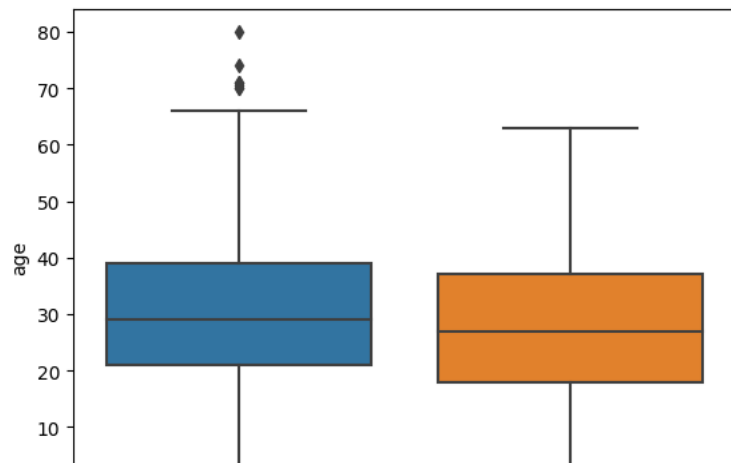
<Axes: xlabel='sex', ylabel='count'>



▼ (C) Box Plot

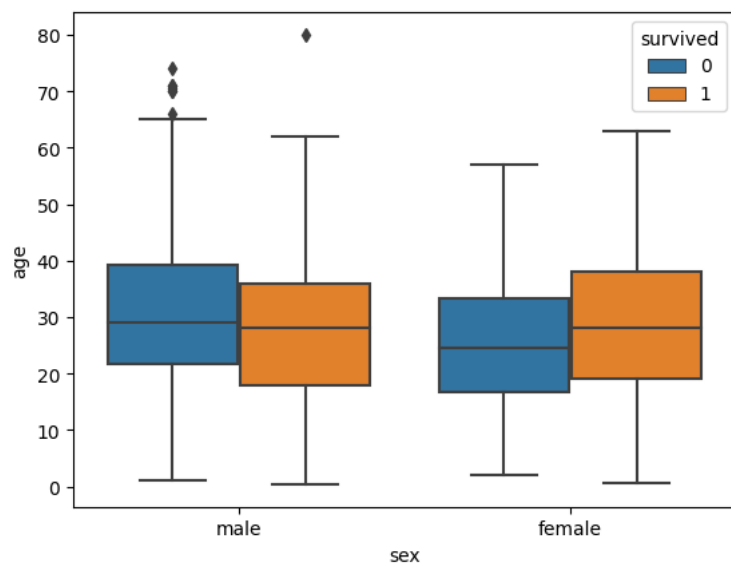
```
sns.boxplot(x='sex', y='age', data=dataset)
```

<Axes: xlabel='sex', ylabel='age'>



```
sns.boxplot(x='sex', y='age', data=dataset, hue="survived")
```

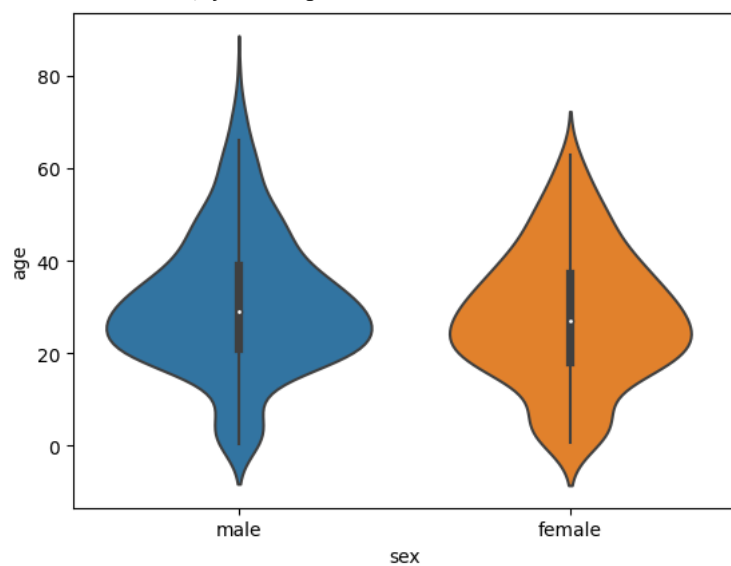
<Axes: xlabel='sex', ylabel='age'>



▼ (D) Violin Plot

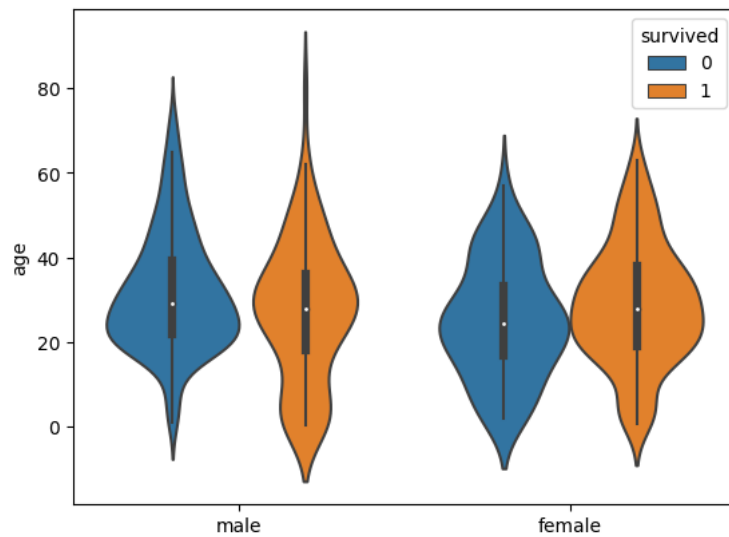
```
sns.violinplot(x='sex', y='age', data=dataset)
```

<Axes: xlabel='sex', ylabel='age'>



```
sns.violinplot(x='sex', y='age', data=dataset, hue='survived')
```

<Axes: xlabel='sex', ylabel='age'>

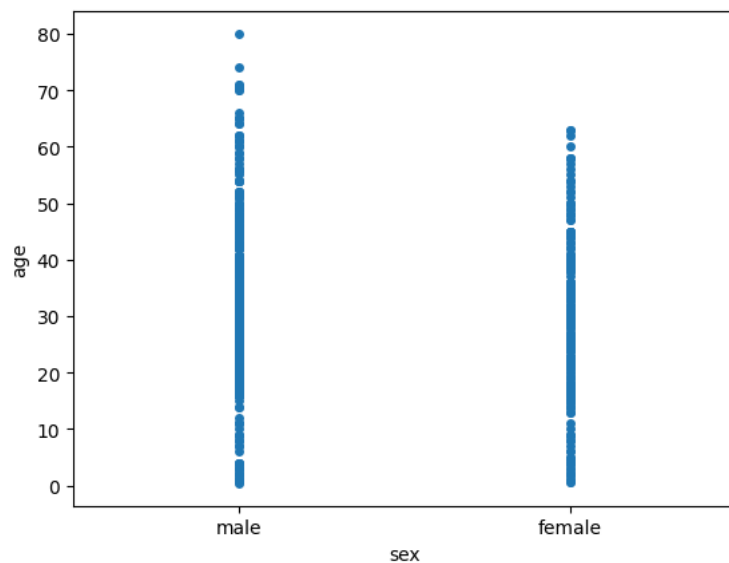


Advanced Plots

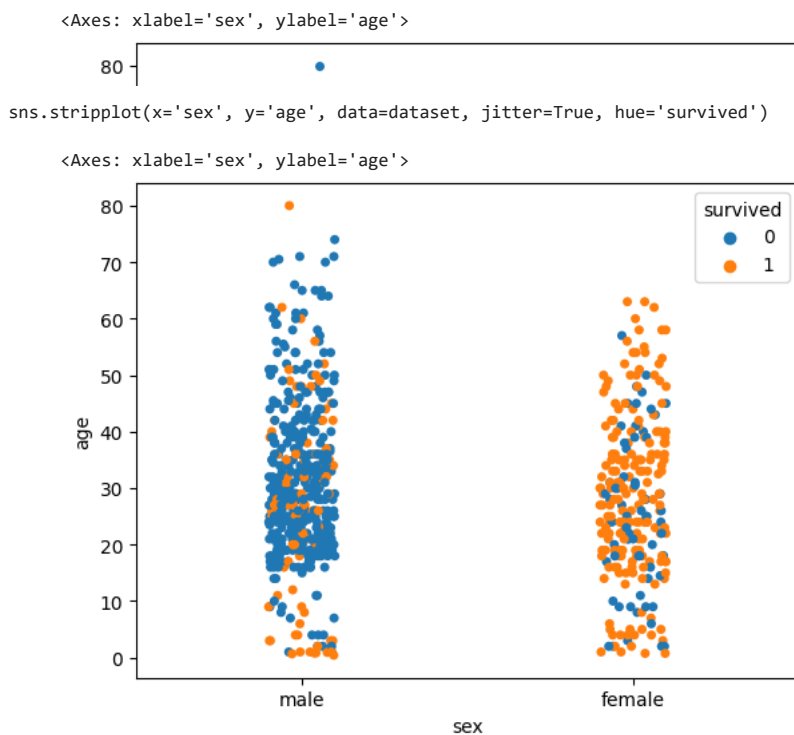
(A) Strip Plot

```
sns.stripplot(x='sex', y='age', data=dataset, jitter=False)
```

<Axes: xlabel='sex', ylabel='age'>

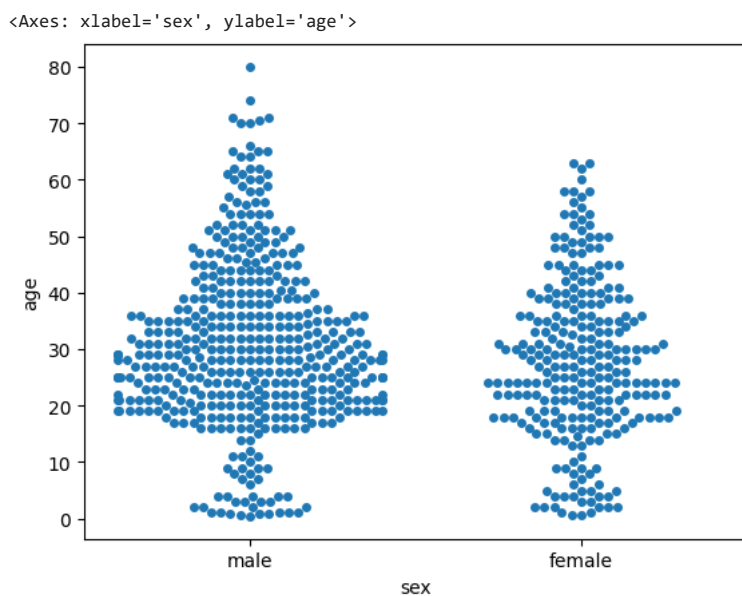


```
sns.stripplot(x='sex', y='age', data=dataset, jitter=True)
```

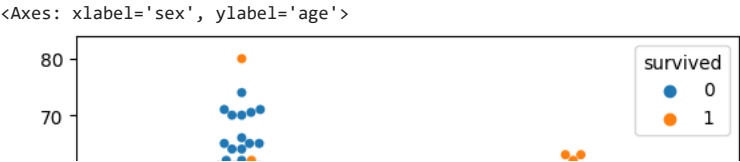


▼ (B) Swarm Plot

```
sns.swarmplot(x='sex', y='age', data=dataset)
```



```
sns.swarmplot(x='sex', y='age', data=dataset, hue='survived')
```



Matrix Plots



(A) Heat Maps



```
dataset.head()
```

	survived	pclass	sex	age	sibsp	parch	fare	embarked	class	who	adult_male	deck	embark_tow
0	0	3	male	22.0	1	0	7.2500	S	Third	man	True	NaN	Southampton
1	1	1	female	38.0	1	0	71.2833	C	First	woman	False	C	Cherbourg
2	1	3	female	26.0	0	0	7.9250	S	Third	woman	False	NaN	Southampton
3	1	1	female	35.0	1	0	53.1000	S	First	woman	False	C	Southampton
4	0	3	male	35.0	0	0	8.0500	S	Third	man	True	NaN	Southampton

```
dataset.corr()
```

<ipython-input-21-c187c74d1e71>:1: FutureWarning: The default value of numeric_only in DataFrame.corr is deprecated. Please specify 'numeric_only=True' to avoid this warning in the future.

```
dataset.corr()
```

	survived	pclass	age	sibsp	parch	fare	adult_male	alone
survived	1.000000	-0.338481	-0.077221	-0.035322	0.081629	0.257307	-0.557080	-0.203367
pclass	-0.338481	1.000000	-0.369226	0.083081	0.018443	-0.549500	0.094035	0.135207
age	-0.077221	-0.369226	1.000000	-0.308247	-0.189119	0.096067	0.280328	0.198270
sibsp	-0.035322	0.083081	-0.308247	1.000000	0.414838	0.159651	-0.253586	-0.584471
parch	0.081629	0.018443	-0.189119	0.414838	1.000000	0.216225	-0.349943	-0.583398
fare	0.257307	-0.549500	0.096067	0.159651	0.216225	1.000000	-0.182024	-0.271832
adult_male	-0.557080	0.094035	0.280328	-0.253586	-0.349943	-0.182024	1.000000	0.404744
alone	-0.203367	0.135207	0.198270	-0.584471	-0.583398	-0.271832	0.404744	1.000000

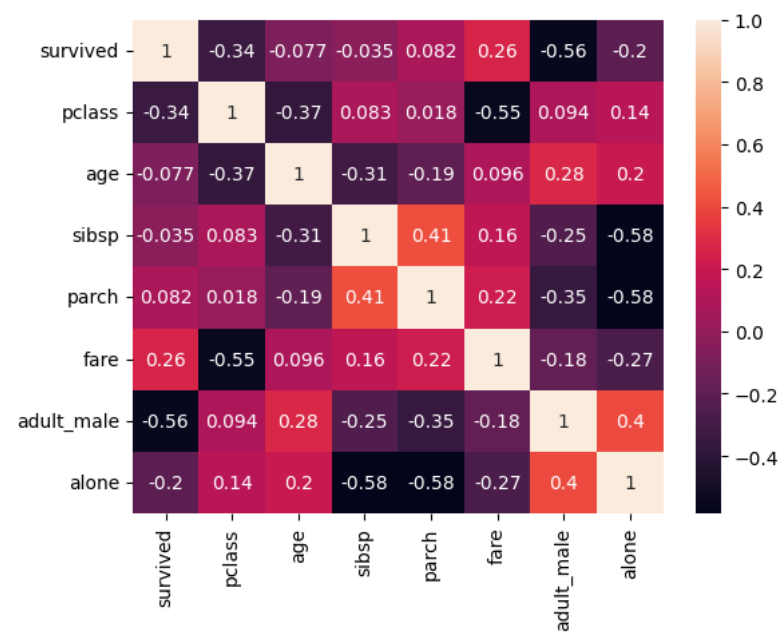


```
corr = dataset.corr()
sns.heatmap(corr)
```



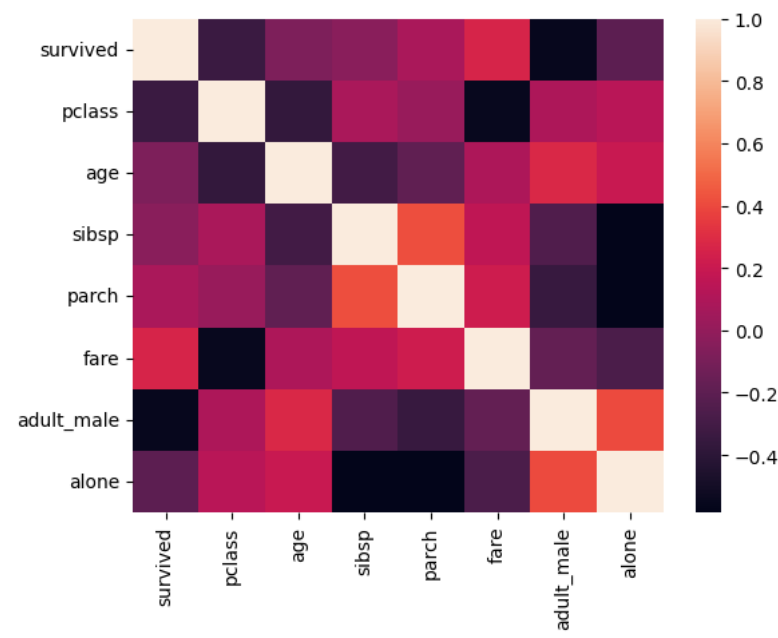
```
<ipython-input-22-e5d4408dc1e8>:1: FutureWarning: The default value of numeric_only in DataFrame.corr is dep
corr = dataset.corr()
sns.heatmap(corr, annot=True)
```

```
<ipython-input-23-1629fca7dbb3>:1: FutureWarning: The default value of numeric_only in DataFrame.corr is dep
corr = dataset.corr()
<Axes: >
```



```
corr = dataset.corr()
sns.heatmap(corr)

<ipython-input-24-e5d4408dc1e8>:1: FutureWarning: The default value of numeric_only i
corr = dataset.corr()
<Axes: >
```

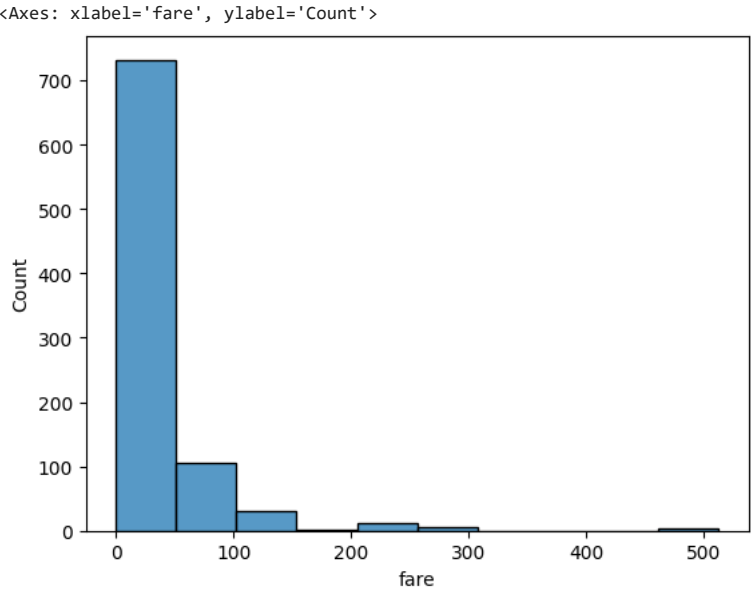


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(B) Cluster Map

(B) Cluster Map

```
sns.histplot(dataset['fare'], kde=False, bins=10)
```



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