

```
In [ ]: #omkar shinde
```

```
In [ ]: #Data Visualization I
```

```
In [1]: pip install seaborn
```

```
Requirement already satisfied: seaborn in c:\users\avcoe\anaconda\lib\site-packages (0.12.2)  
Requirement already satisfied: numpy!=1.24.0,>=1.17 in c:\users\avcoe\anaconda\lib\site-packages (from seaborn) (1.24.3)  
Requirement already satisfied: pandas>=0.25 in c:\users\avcoe\anaconda\lib\site-packages (from seaborn) (2.0.3)  
Requirement already satisfied: matplotlib!=3.6.1,>=3.1 in c:\users\avcoe\anaconda\lib\site-packages (from seaborn) (3.7.2)  
Requirement already satisfied: contourpy>=1.0.1 in c:\users\avcoe\anaconda\lib\site-packages (from matplotlib!=3.6.1,>=3.1->seaborn) (1.0.5)  
Requirement already satisfied: cycler>=0.10 in c:\users\avcoe\anaconda\lib\site-packages (from matplotlib!=3.6.1,>=3.1->seaborn) (0.11.0)  
Requirement already satisfied: fonttools>=4.22.0 in c:\users\avcoe\anaconda\lib\site-packages (from matplotlib!=3.6.1,>=3.1->seaborn) (4.25.0)  
Requirement already satisfied: kiwisolver>=1.0.1 in c:\users\avcoe\anaconda\lib\site-packages (from matplotlib!=3.6.1,>=3.1->seaborn) (1.4.4)  
Requirement already satisfied: packaging>=20.0 in c:\users\avcoe\anaconda\lib\site-packages (from matplotlib!=3.6.1,>=3.1->seaborn) (23.1)  
Requirement already satisfied: pillow>=6.2.0 in c:\users\avcoe\anaconda\lib\site-packages (from matplotlib!=3.6.1,>=3.1->seaborn) (9.4.0)  
Requirement already satisfied: pyparsing<3.1,>=2.3.1 in c:\users\avcoe\anaconda\lib\site-packages (from matplotlib!=3.6.1,>=3.1->seaborn) (3.0.9)  
Requirement already satisfied: python-dateutil>=2.7 in c:\users\avcoe\anaconda\lib\site-packages (from matplotlib!=3.6.1,>=3.1->seaborn) (2.8.2)  
Requirement already satisfied: pytz>=2020.1 in c:\users\avcoe\anaconda\lib\site-packages (from pandas>=0.25->seaborn) (2023.3.post1)  
Requirement already satisfied: tzdata>=2022.1 in c:\users\avcoe\anaconda\lib\site-packages (from pandas>=0.25->seaborn) (2023.3)  
Requirement already satisfied: six>=1.5 in c:\users\avcoe\anaconda\lib\site-packages (from python-dateutil>=2.7->matplotlib!=3.6.1,>=3.1->seaborn) (1.16.0)  
Note: you may need to restart the kernel to use updated packages.
```

In [2]: `conda install seaborn`

```
ca-certificates                2023.08.22-haa95532_0 --> 2024.3.1
1-haa95532_0
certifi                        2023.7.22-py311haa95532_0 --> 2024.2.2
-py311haa95532_0
openssl                        3.0.10-h2bfff1b_2 --> 3.0.13-h
2bfff1b_0
```

Downloading and Extracting Packages

```
certifi-2024.2.2      | 162 KB      |          | 0%
ca-certificates-2024 | 128 KB      |          | 0%

openssl-3.0.13        | 7.4 MB      |          | 0%
```

In []: `#loading dataset`

```
In [3]: import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns
dataset = sns.load_dataset('titanic')
dataset.head()
```

Out[3]:

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

In []: `#histogram Matplotlib`

In []: `#1.The Dist plot`

```
In [4]: sns.distplot(dataset['fare'])
```

C:\Users\avcoe\AppData\Local\Temp\ipykernel_12252\1694218074.py:1: UserWarning:

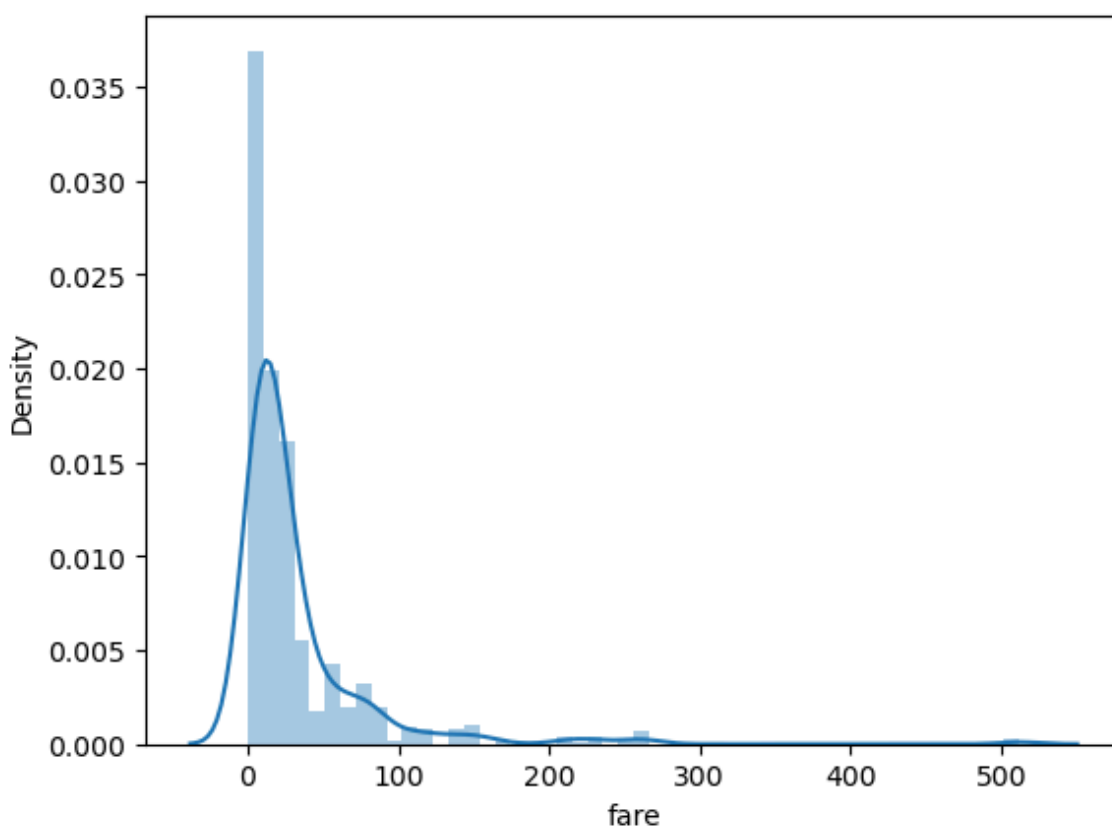
`distplot` is a deprecated function and will be removed in seaborn v0.14.0.

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> (<https://gist.github.com/mwaskom/de44147ed2974457ad6372750bbe5751>)

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

Out[4]: <Axes: xlabel='fare', ylabel='Density'>



```
In [5]: sns.distplot(dataset['fare'], kde=False)
```

C:\Users\avcoe\AppData\Local\Temp\ipykernel_12252\1623915515.py:1: UserWarning:

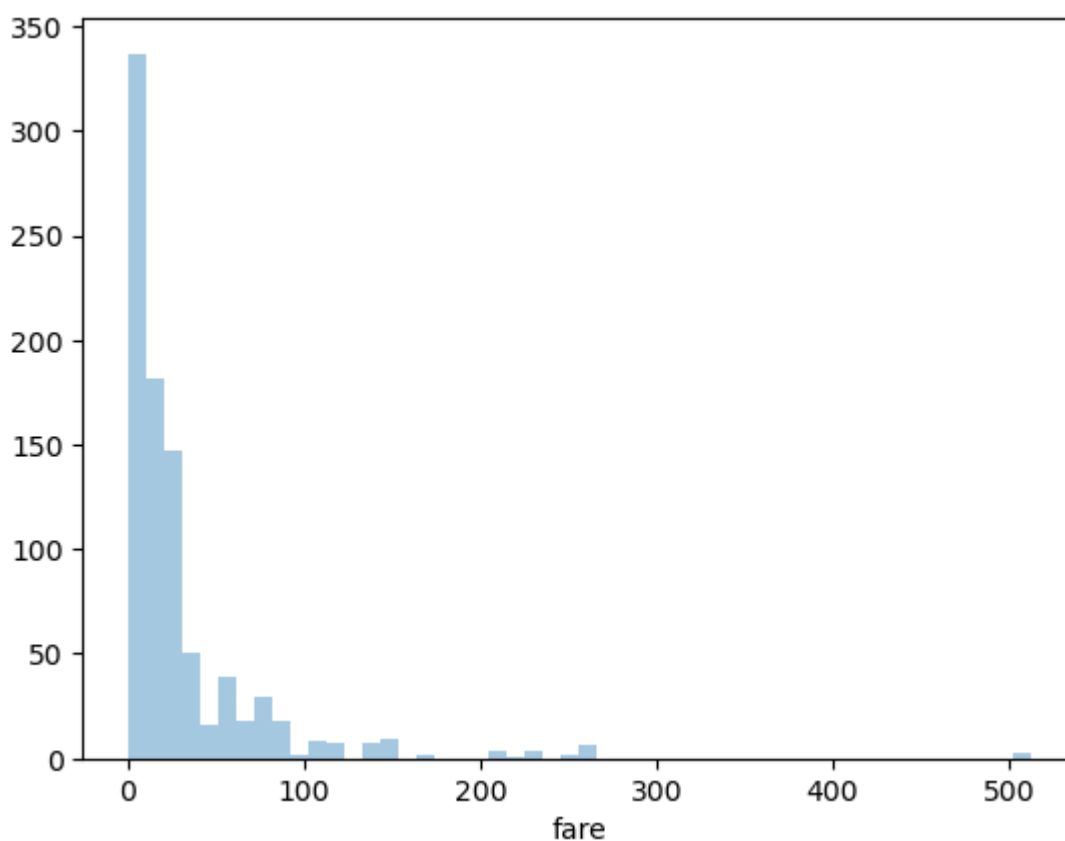
`distplot` is a deprecated function and will be removed in seaborn v0.14.0.

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> (<https://gist.github.com/mwaskom/de44147ed2974457ad6372750bbe5751>)

```
sns.distplot(dataset['fare'], kde=False)
```

Out[5]: <Axes: xlabel='fare'>



```
In [6]: sns.distplot(dataset['fare'], kde=False, bins=10)
```

C:\Users\avcoe\AppData\Local\Temp\ipykernel_12252\1857470142.py:1: UserWarning:

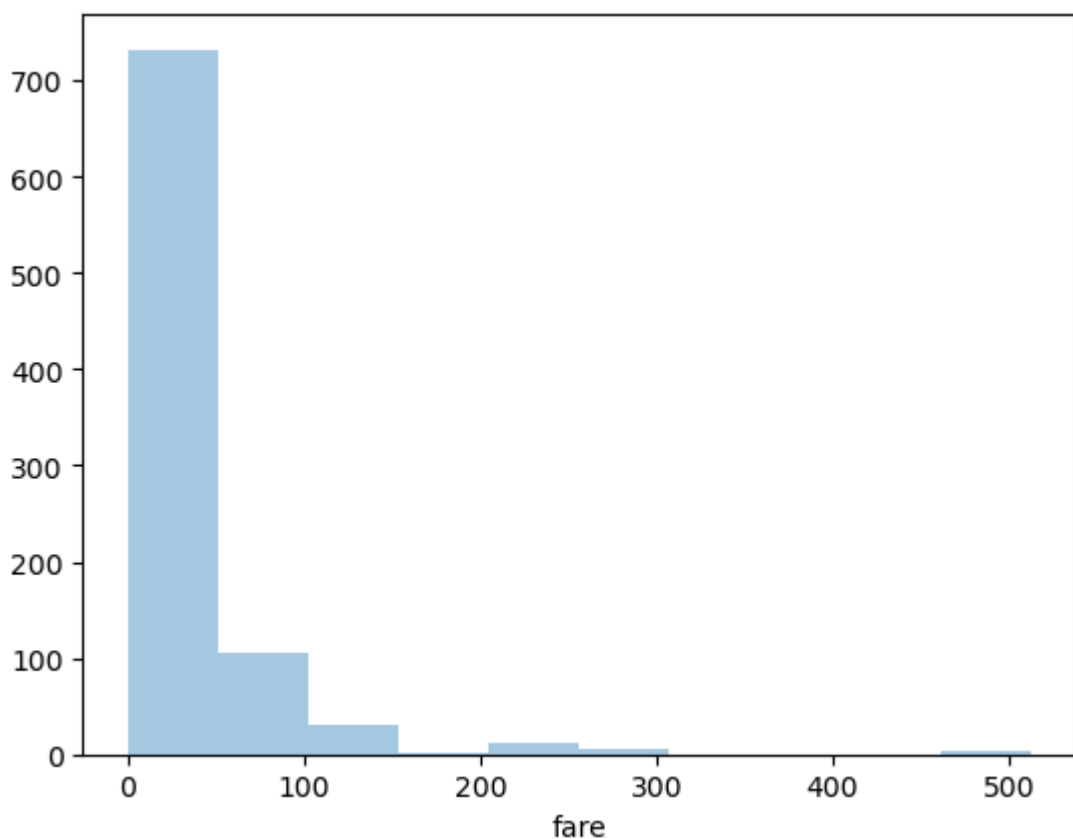
`distplot` is a deprecated function and will be removed in seaborn v0.14.0.

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> (<https://gist.github.com/mwaskom/de44147ed2974457ad6372750bbe5751>)

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

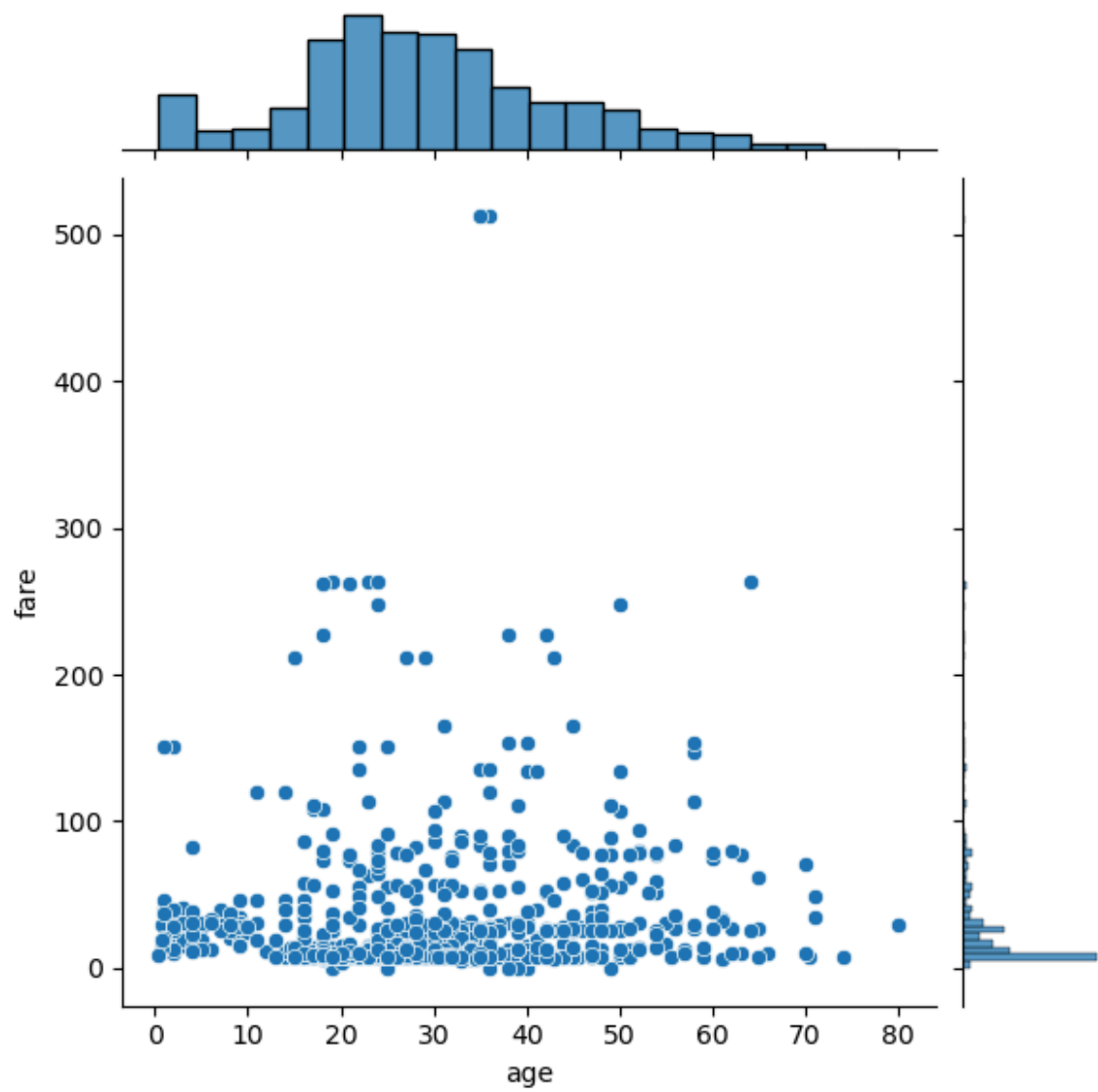
Out[6]: <Axes: xlabel='fare'>



```
In [ ]: #2.The joint plot
```

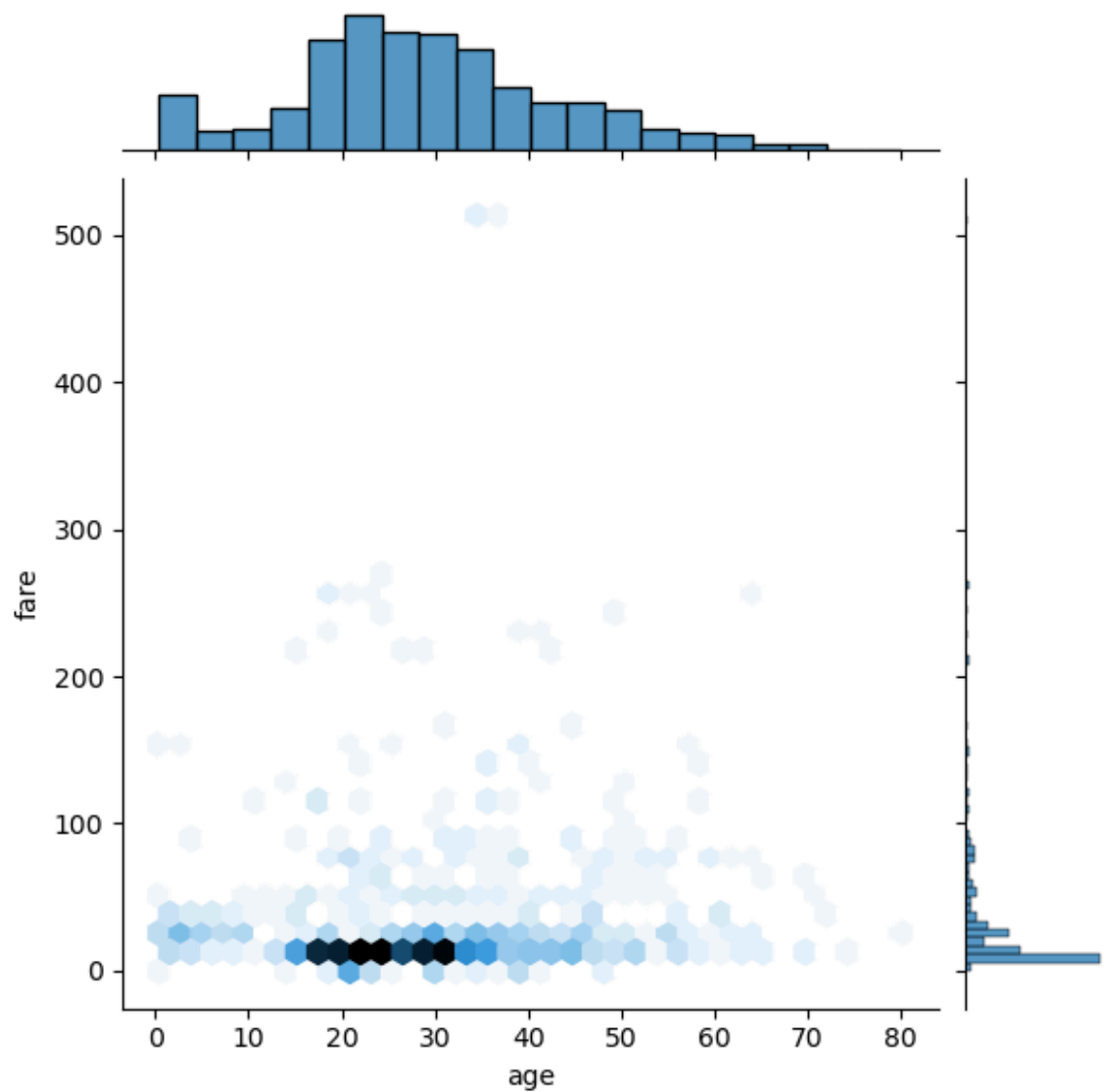
```
In [7]: sns.jointplot(x='age', y='fare', data=dataset)
```

```
Out[7]: <seaborn.axisgrid.JointGrid at 0x1a574d6eb10>
```



```
In [8]: sns.jointplot(x='age',y='fare',data=dataset,kind='hex')
```

```
Out[8]: <seaborn.axisgrid.JointGrid at 0x1a56f0f2690>
```

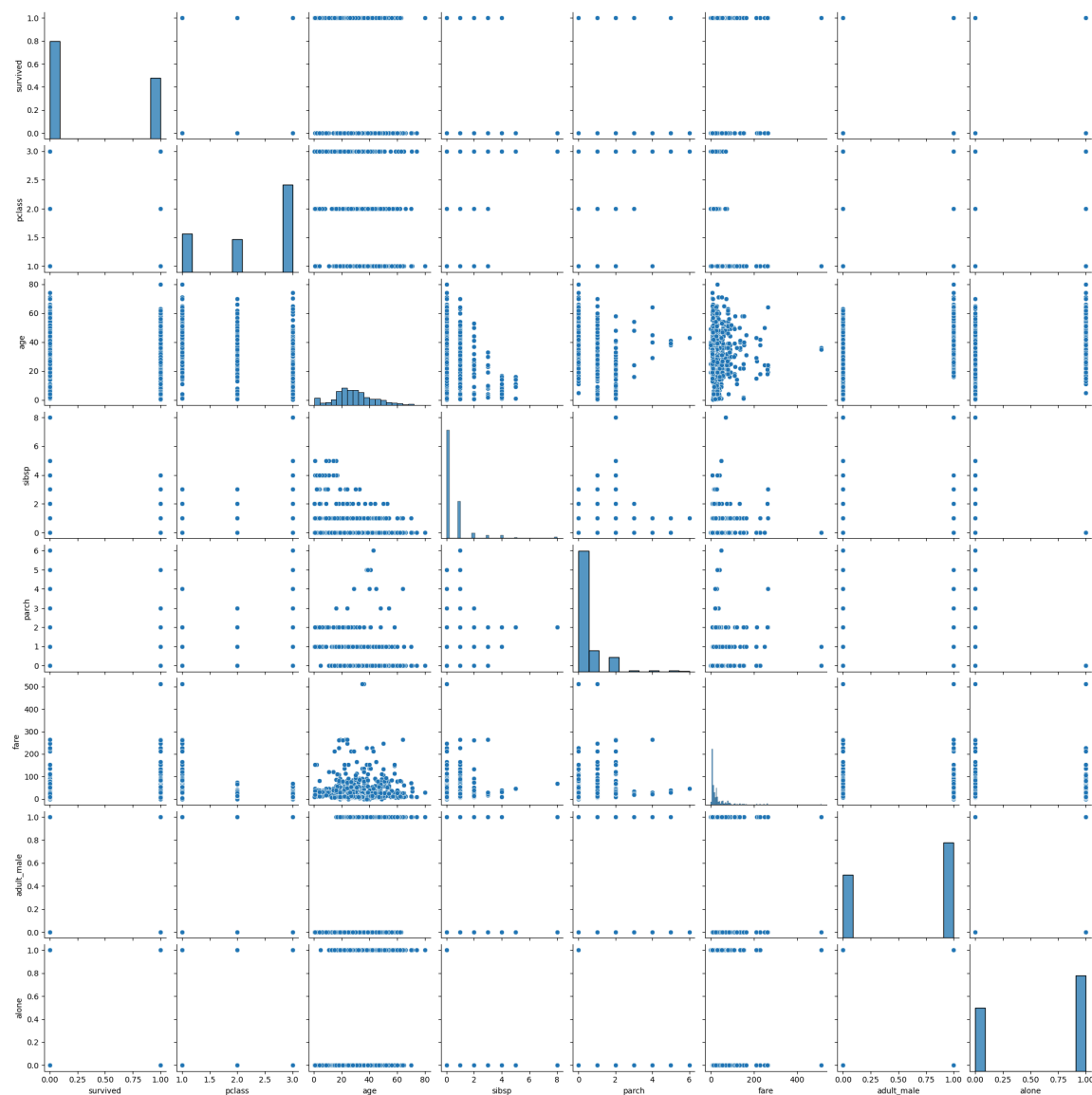


```
In [ ]: #2.The pair Plot
```

```
In [9]: sns.pairplot(dataset)
```

```
<__array_function__ internals>:200: RuntimeWarning: Converting input from
bool to <class 'numpy.uint8'> for compatibility.
<__array_function__ internals>:200: RuntimeWarning: Converting input from
bool to <class 'numpy.uint8'> for compatibility.
C:\Users\avcoe\anaconda\Lib\site-packages\seaborn\axisgrid.py:118: UserWar
ning: The figure layout has changed to tight
self._figure.tight_layout(*args, **kwargs)
```

```
Out[9]: <seaborn.axisgrid.PairGrid at 0x1a577b5cf90>
```



```
In [ ]: # remove all null values from the dataset
```

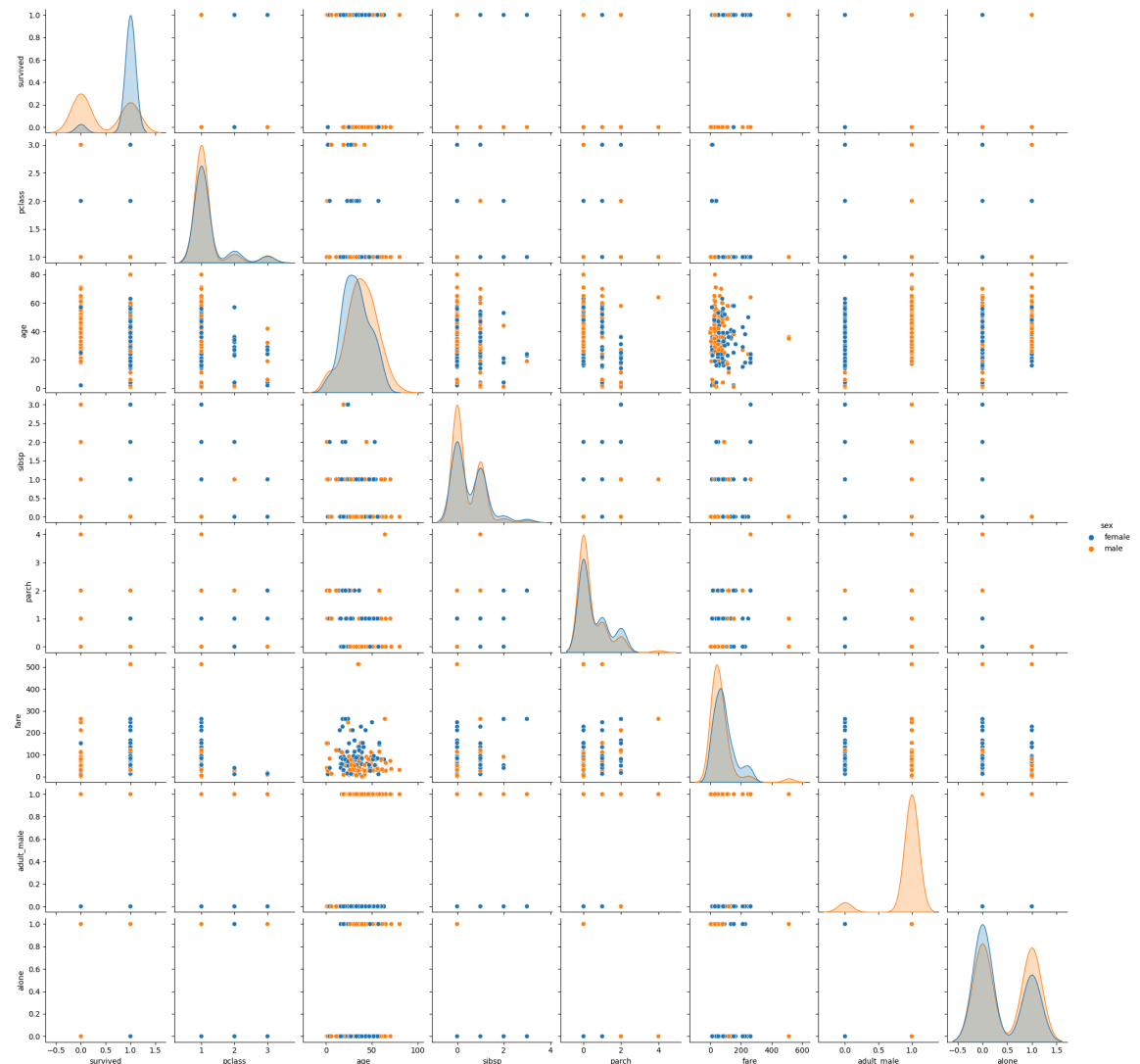
```
In [10]: dataset = dataset.dropna()
```



```
In [11]: sns.pairplot(dataset, hue='sex')
```

C:\Users\avcoe\anaconda\Lib\site-packages\seaborn\axisgrid.py:118: UserWarning: The figure layout has changed to tight
self.figure.tight_layout(*args, **kwargs)

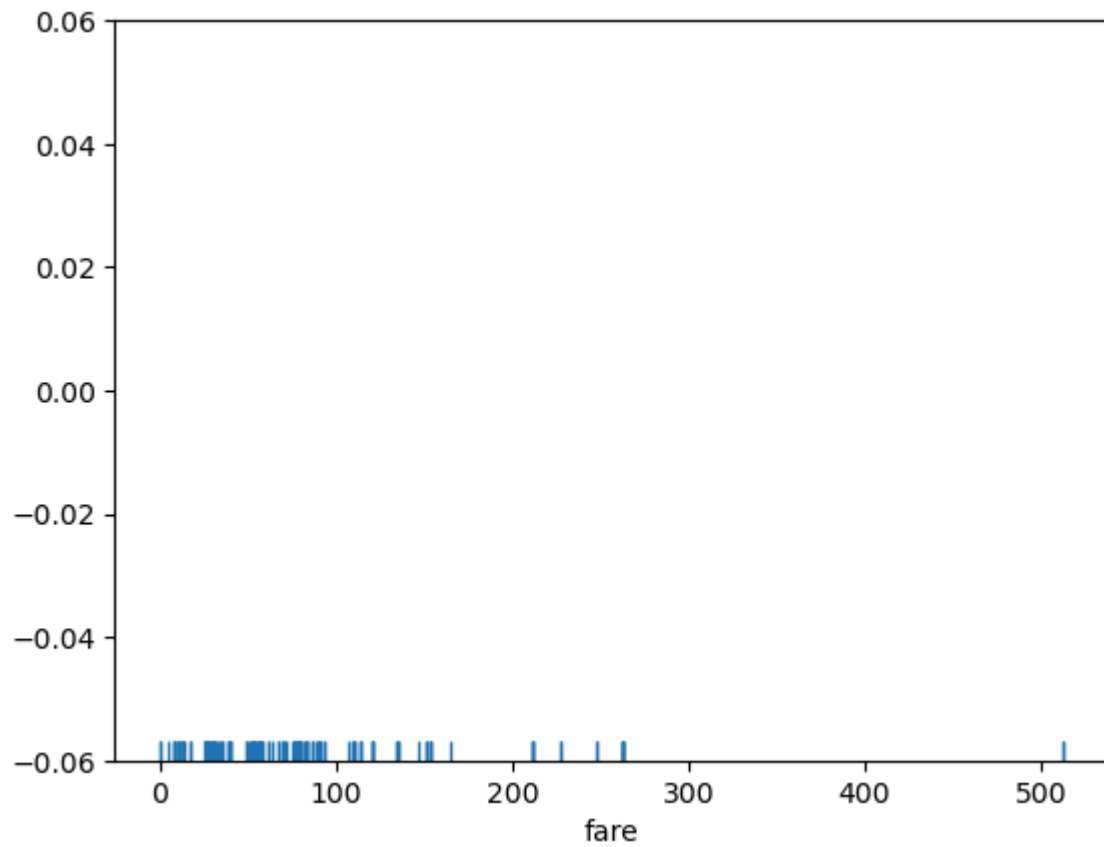
```
Out[11]: <seaborn.axisgrid.PairGrid at 0x1a577c09990>
```



```
In [ ]: #4.The Rug Plot
```

```
In [12]: sns.rugplot(dataset['fare'])
```

```
Out[12]: <Axes: xlabel='fare'>
```



```
In [ ]:
```

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In [ ]:
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