anurag-dsbdal-pr8

April 15, 2024

```
[2]: import pandas as pd
     import numpy as np
     import matplotlib.pyplot as plt
     import seaborn as sns
```

```
[3]: dataset = sns.load_dataset('titanic')
```

```
[4]: dataset.head()
```

```
[4]:    survived  pclass     sex   age  sibsp  parch      fare embarked  class  \
     0         0       3    male  22.0      1      0    7.2500        S  Third
     1         1       1  female  38.0      1      0   71.2833        C  First
     2         1       3  female  26.0      0      0    7.9250        S  Third
     3         1       1  female  35.0      1      0   53.1000        S  First
     4         0       3    male  35.0      0      0    8.0500        S  Third

          who  adult_male deck  embark_town alive  alone
     0    man        True  NaN  Southampton    no  False
     1  woman       False    C    Cherbourg   yes  False
     2  woman       False  NaN  Southampton   yes   True
     3  woman       False    C  Southampton   yes  False
     4    man        True  NaN  Southampton    no   True
```

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

C:\Users\System21\AppData\Local\Temp\ipykernel_5208\2548176949.py:2:
UserWarning:

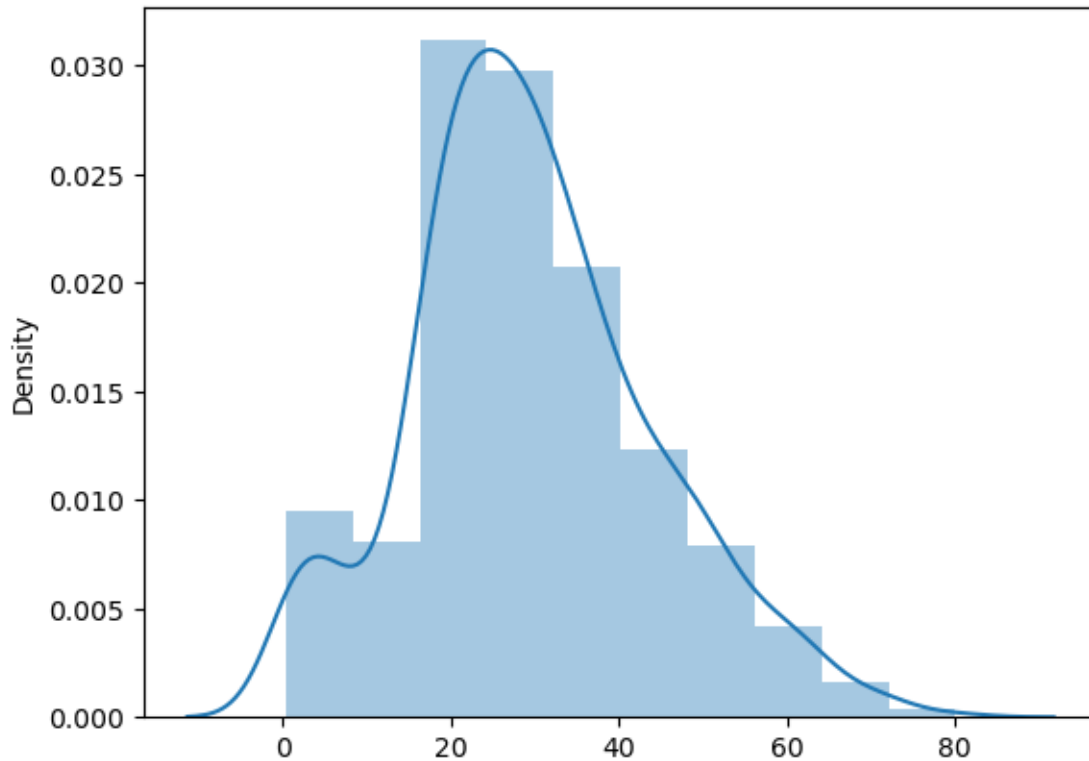`distplot` is a deprecated function and will be removed in seaborn v0.14.0.

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)

```
C:\Users\System21\anaconda3\Lib\site-packages\seaborn\_oldcore.py:1119:
FutureWarning: use_inf_as_na option is deprecated and will be removed in a
future version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
```

[5]: <Axes: ylabel='Density'>

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

```
C:\Users\System21\AppData\Local\Temp\ipykernel_5208\3517108427.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

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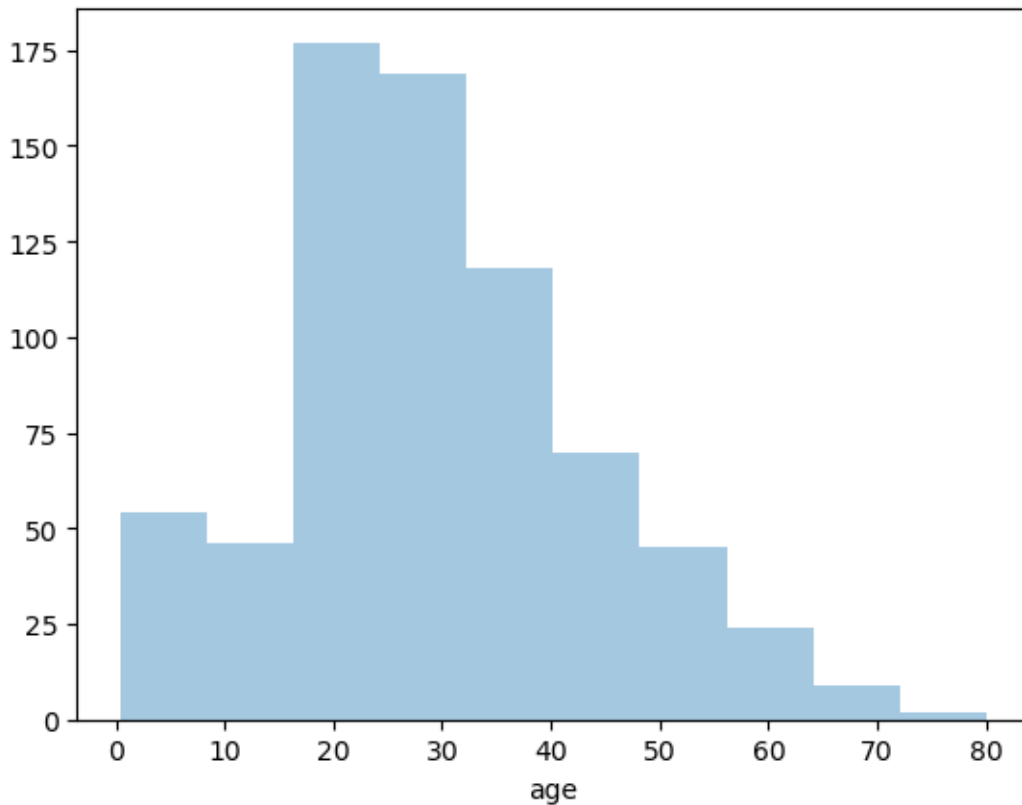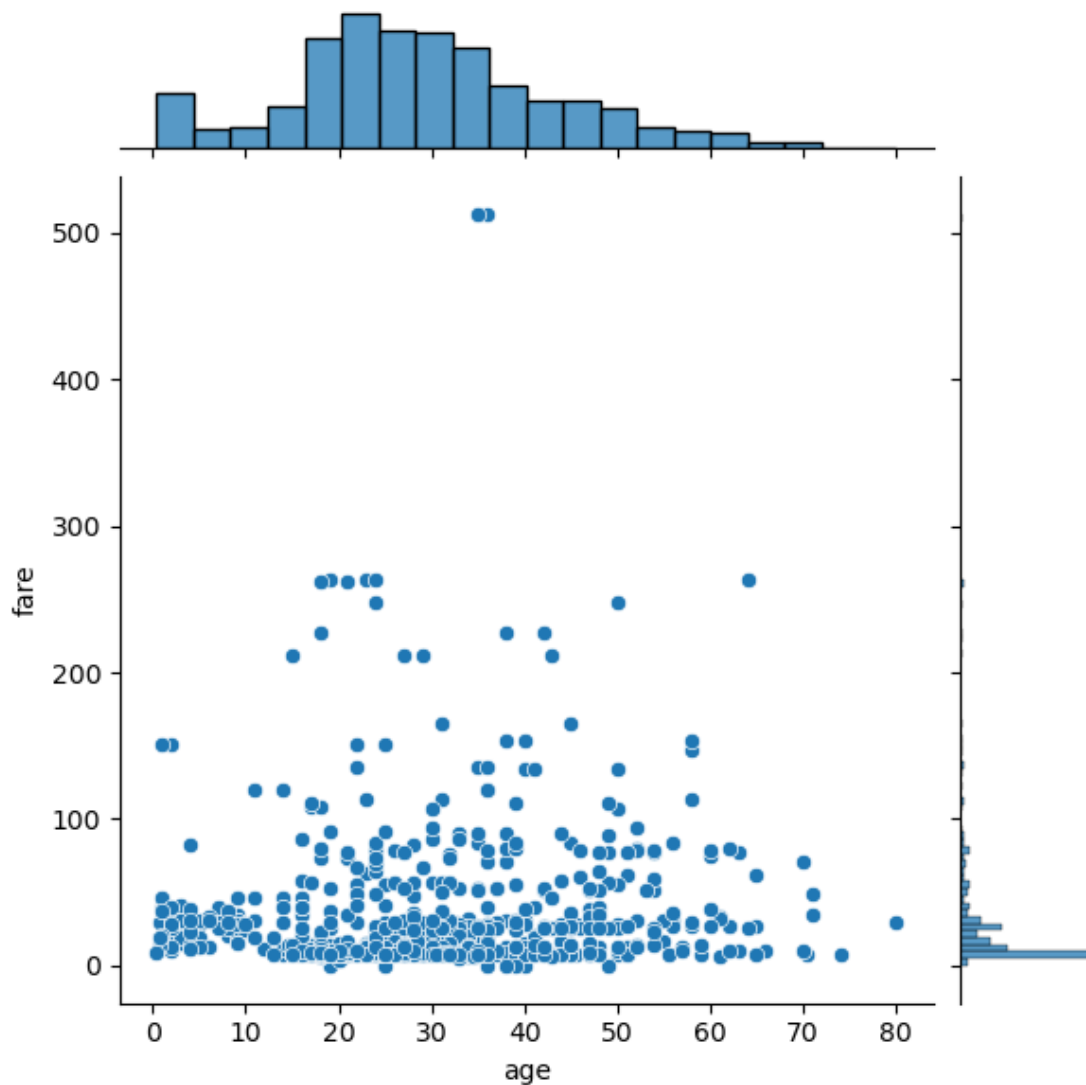
[6]: <Axes: xlabel='age'>

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

C:\Users\System21\anaconda3\Lib\site-packages\seaborn_oldcore.py:1119:
FutureWarning: use_inf_as_na option is deprecated and will be removed in a
future version. Convert inf values to NaN before operating instead.
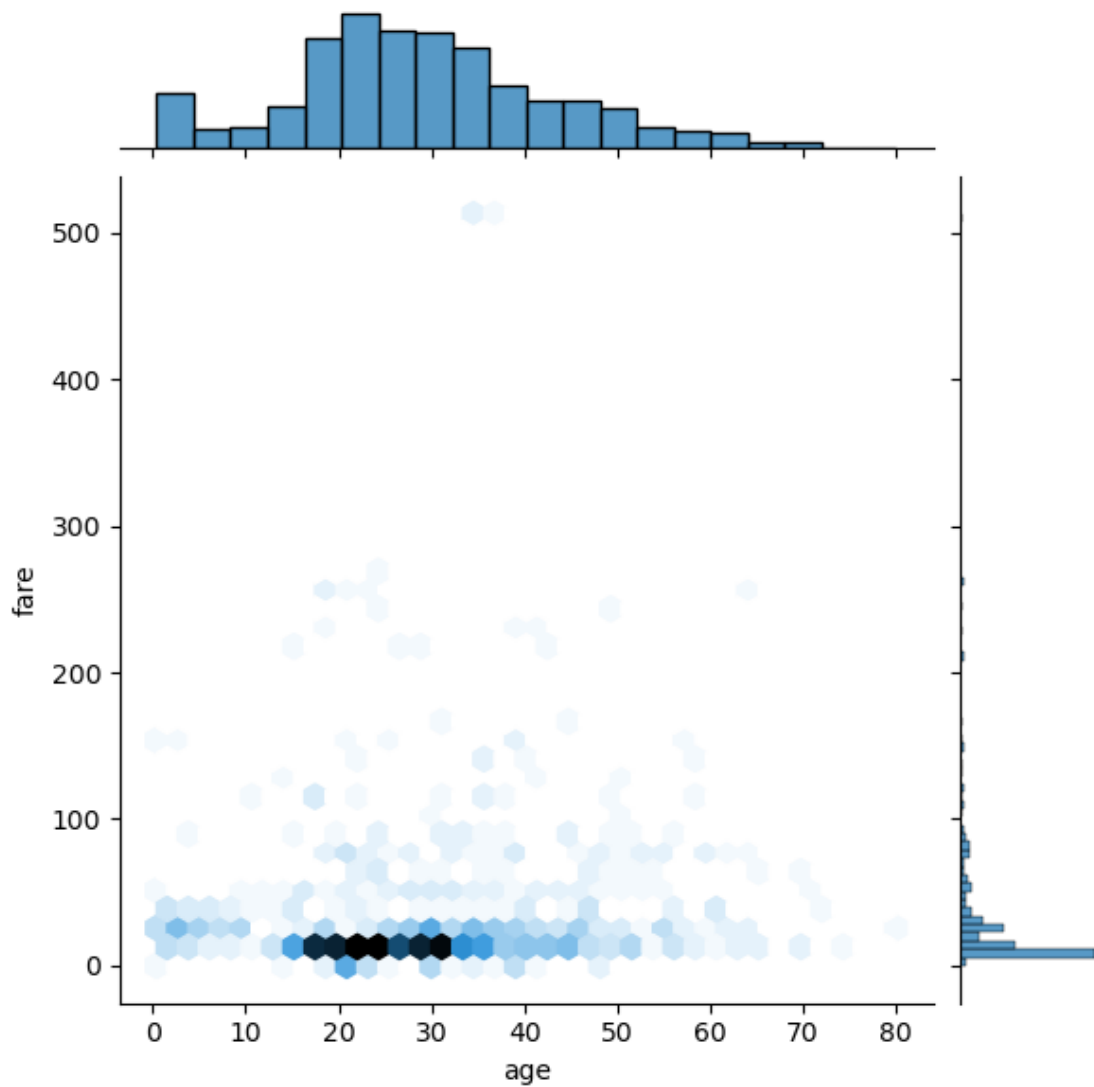 with pd.option_context('mode.use_inf_as_na', True):
C:\Users\System21\anaconda3\Lib\site-packages\seaborn_oldcore.py:1119:
FutureWarning: use_inf_as_na option is deprecated and will be removed in a
future version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):

[7]: <seaborn.axisgrid.JointGrid at 0x1e391cf2650>

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

C:\Users\System21\anaconda3\Lib\site-packages\seaborn_oldcore.py:1119:
FutureWarning: use_inf_as_na option is deprecated and will be removed in a
future version. Convert inf values to NaN before operating instead.
 with pd.option_context('mode.use_inf_as_na', True):
C:\Users\System21\anaconda3\Lib\site-packages\seaborn_oldcore.py:1119:
FutureWarning: use_inf_as_na option is deprecated and will be removed in a
future version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):

[8]: <seaborn.axisgrid.JointGrid at 0x1e38f2eeb10>

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

C:\Users\System21\anaconda3\Lib\site-packages\seaborn_oldcore.py:1119:
FutureWarning: use_inf_as_na option is deprecated and will be removed in a
future version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):

```
[9]: <Axes: xlabel='fare'>
```
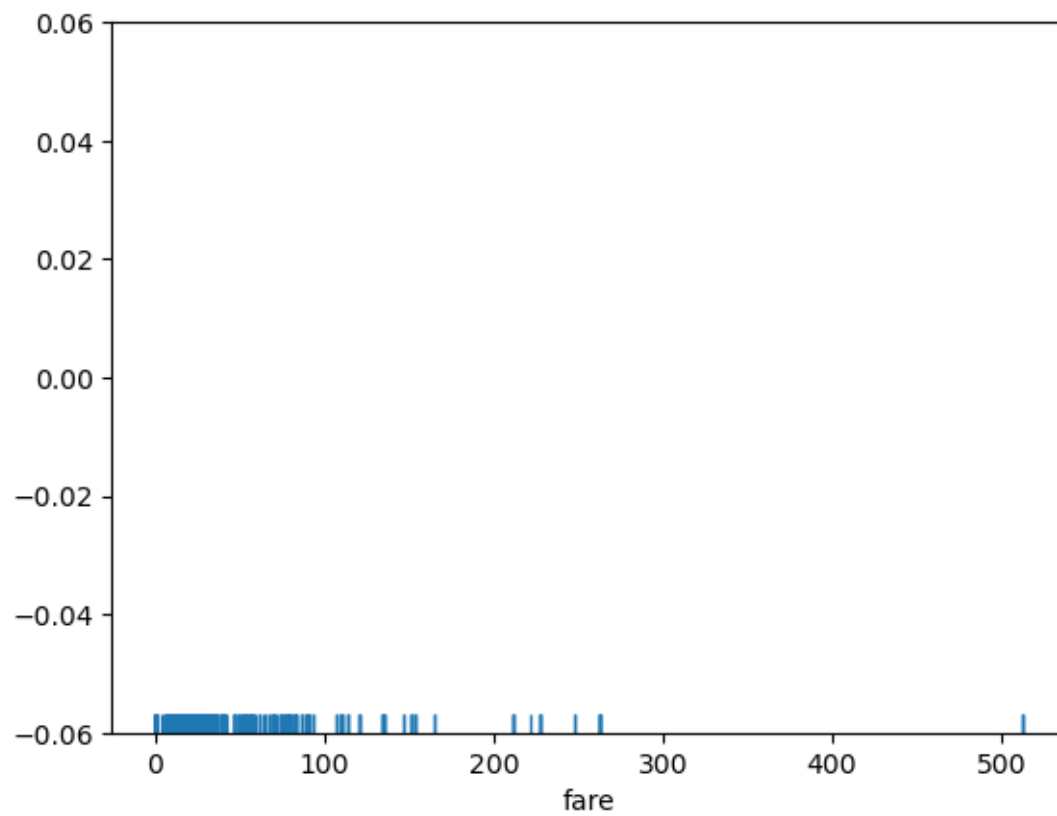
```
[10]: sns.barplot(x='sex', y='age', data=dataset)
```
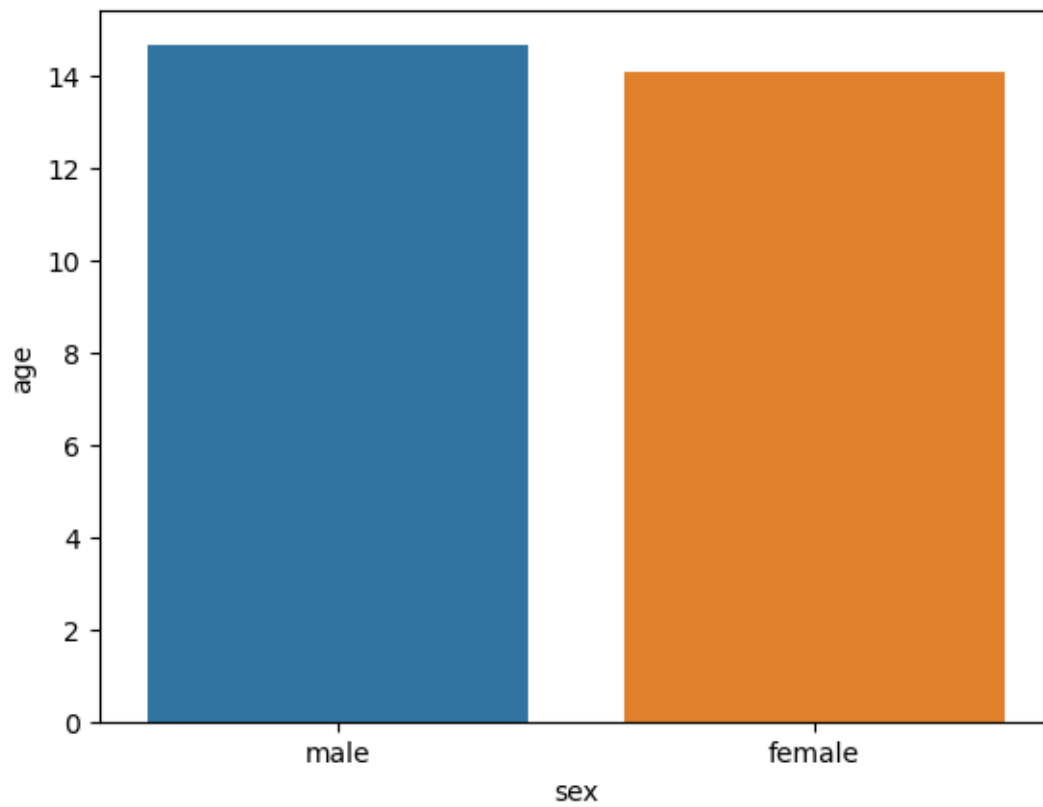
```
[10]: <Axes: xlabel='sex', ylabel='age'>
```
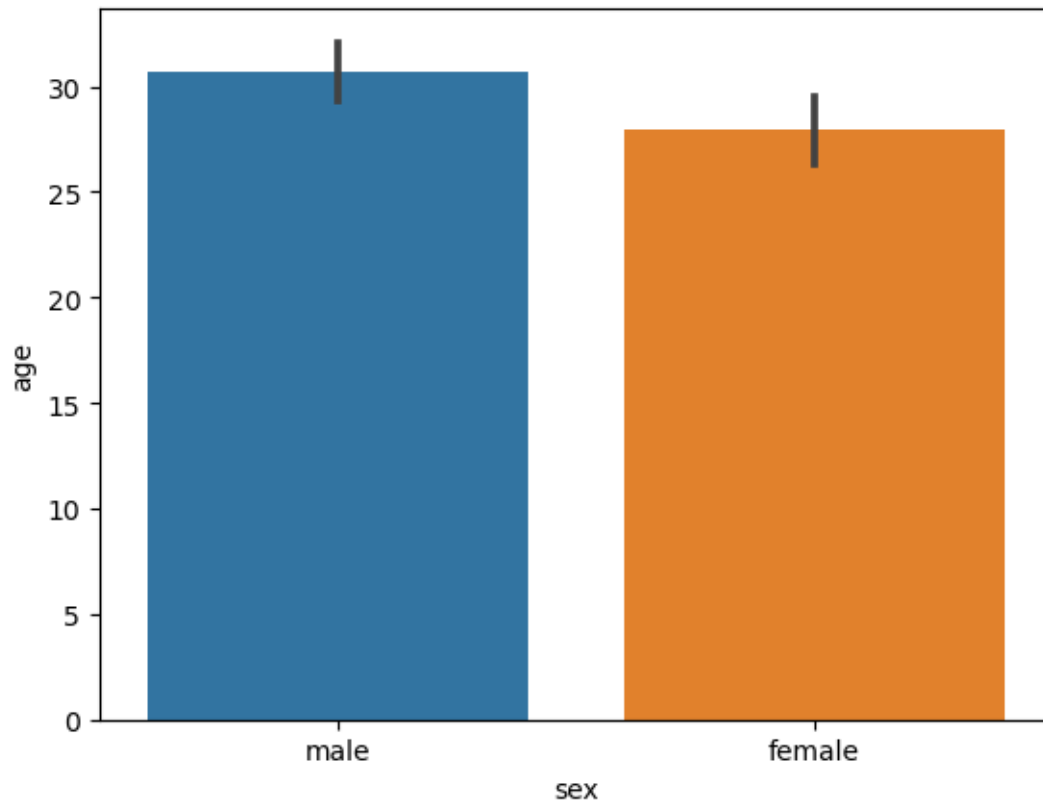
```
[11]: sns.barplot(x='sex', y='age', data=dataset, estimator=np.std)
```

```
C:\Users\System21\anaconda3\Lib\site-packages\numpy\lib\nanfunctions.py:1384:
RuntimeWarning: All-NaN slice encountered
  return _nanquantile_unchecked(
```

```
[11]: <Axes: xlabel='sex', ylabel='age'>
```
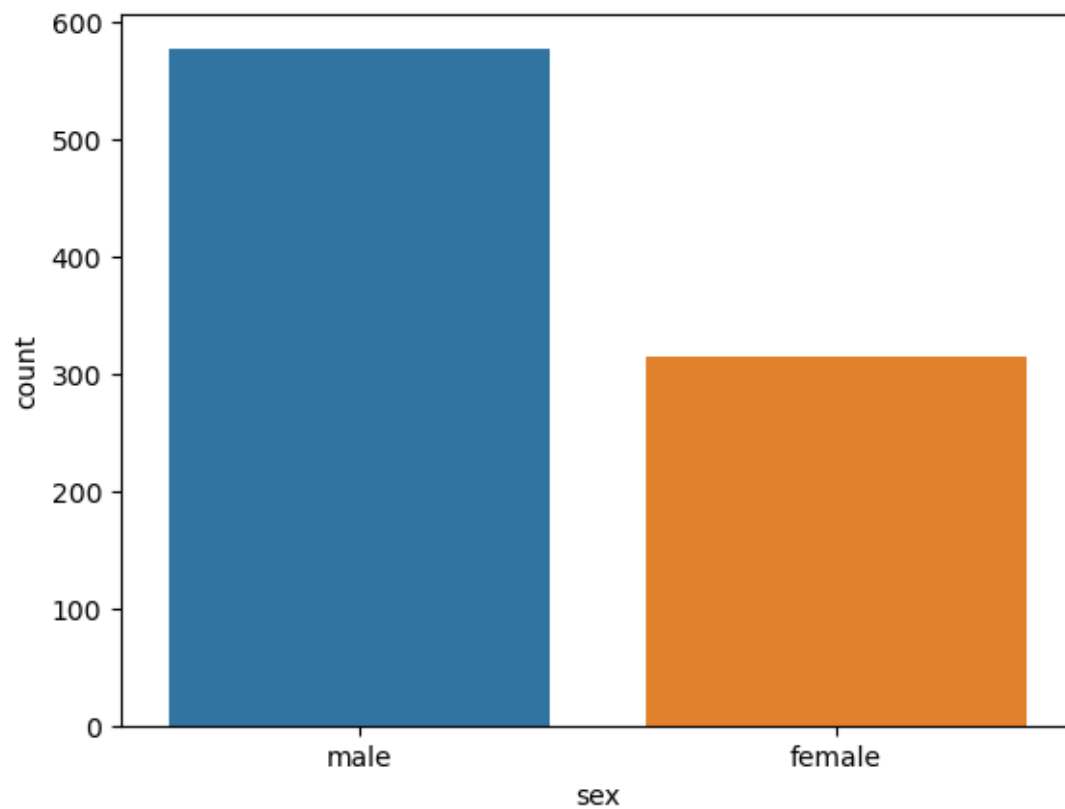
```
[12]: sns.countplot(x='sex', data=dataset)
```
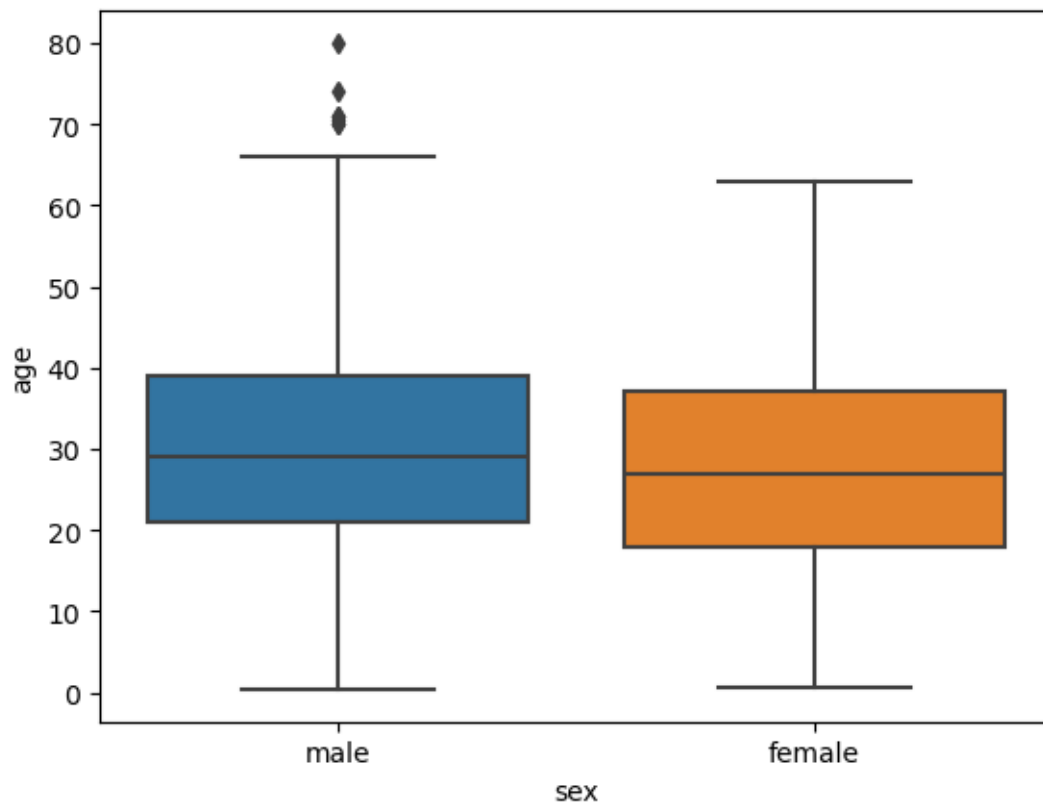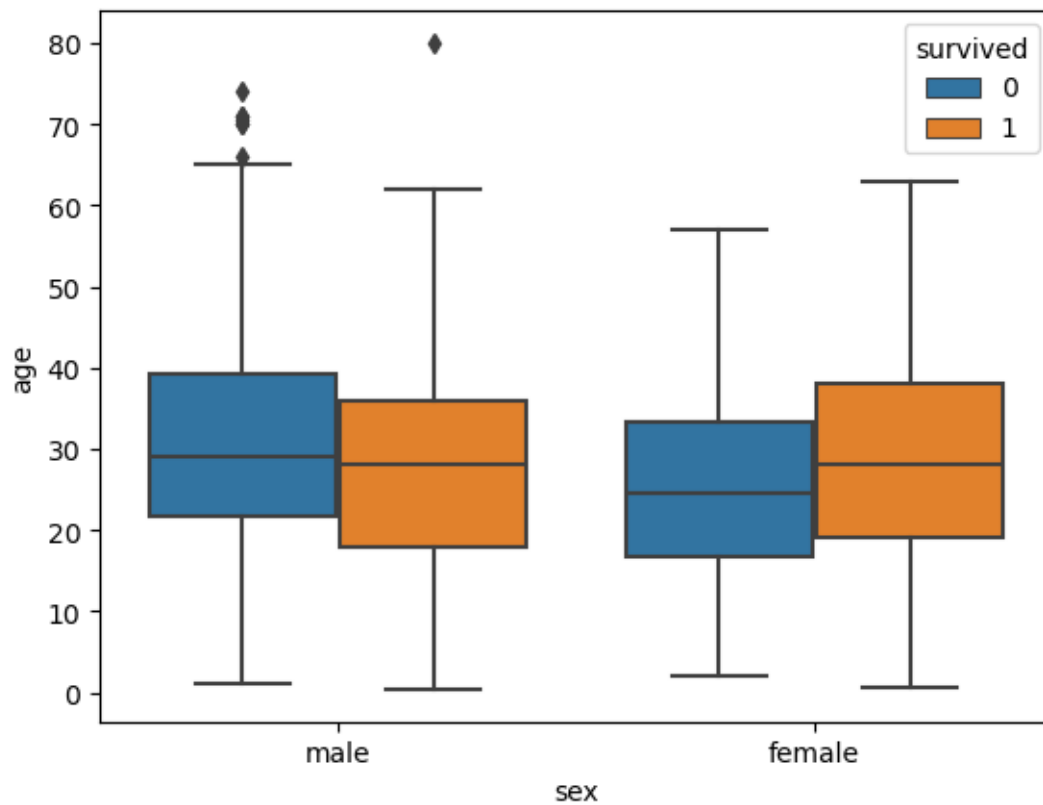
```
[12]: <Axes: xlabel='sex', ylabel='count'>
```

```
[13]: sns.boxplot(x='sex', y='age', data=dataset)
```
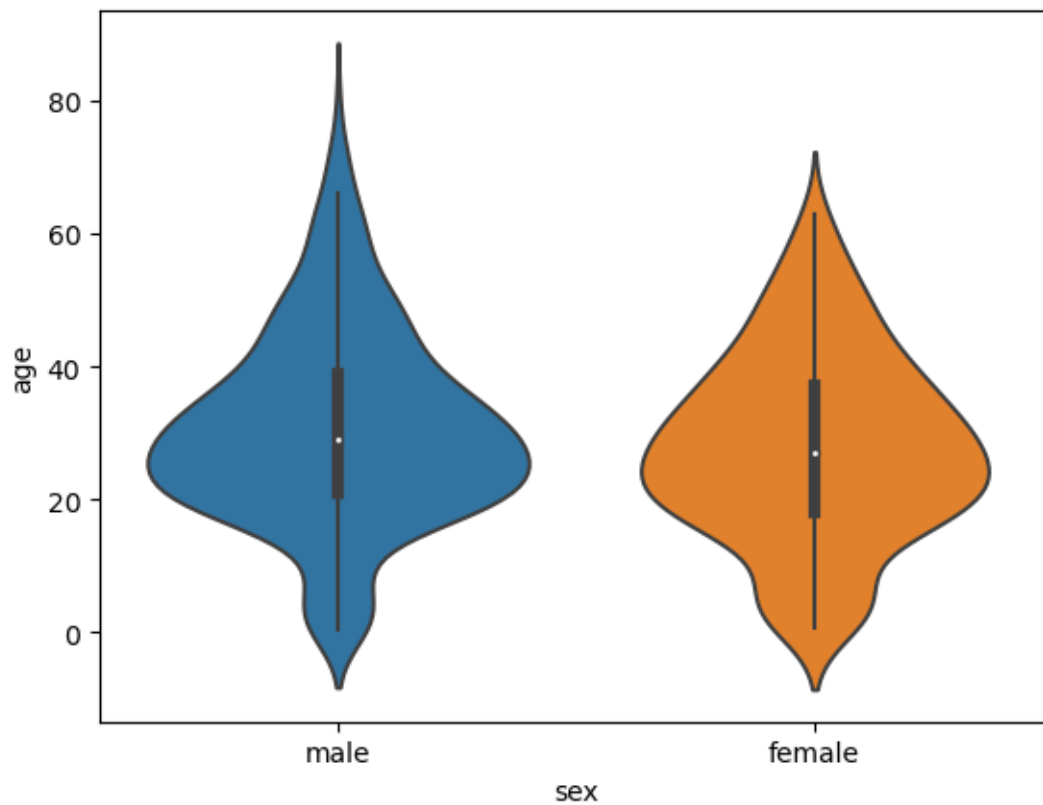
```
[13]: <Axes: xlabel='sex', ylabel='age'>
```

9

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

[14]: `<Axes: xlabel='sex', ylabel='age'>`
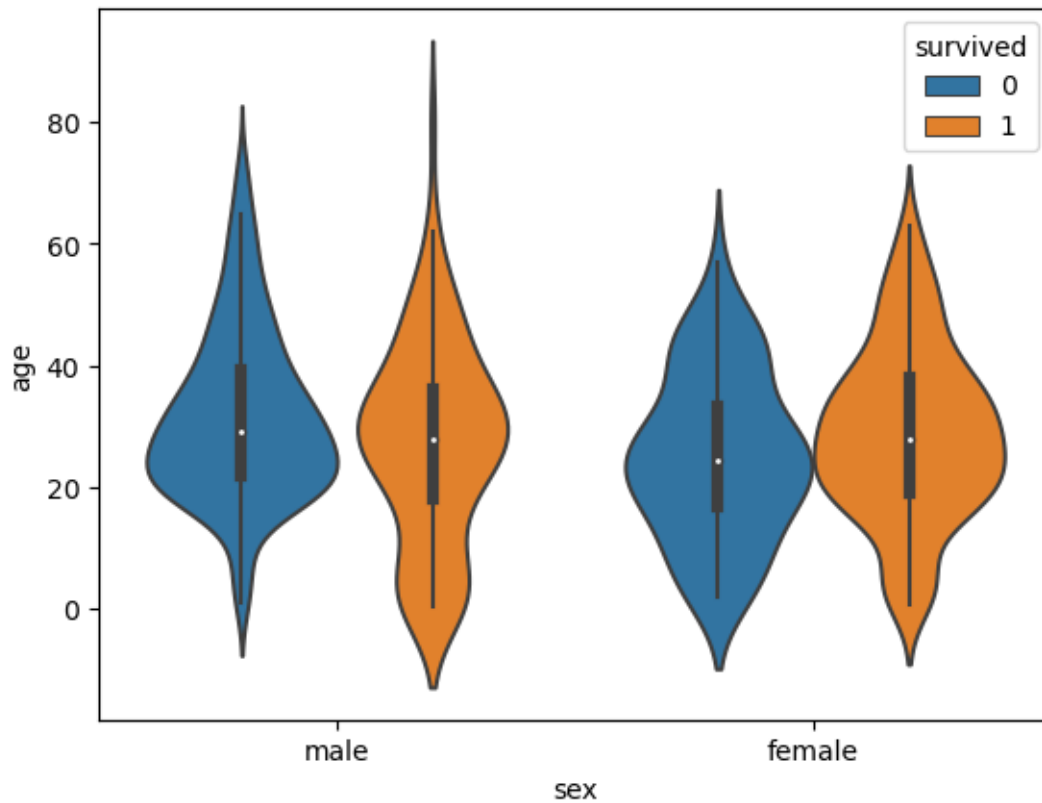
```
[15]: sns.violinplot(x='sex', y='age', data=dataset)
```

```
[15]: <Axes: xlabel='sex', ylabel='age'>
```

```
[16]: sns.violinplot(x='sex', y='age', data=dataset, hue="survived")
```
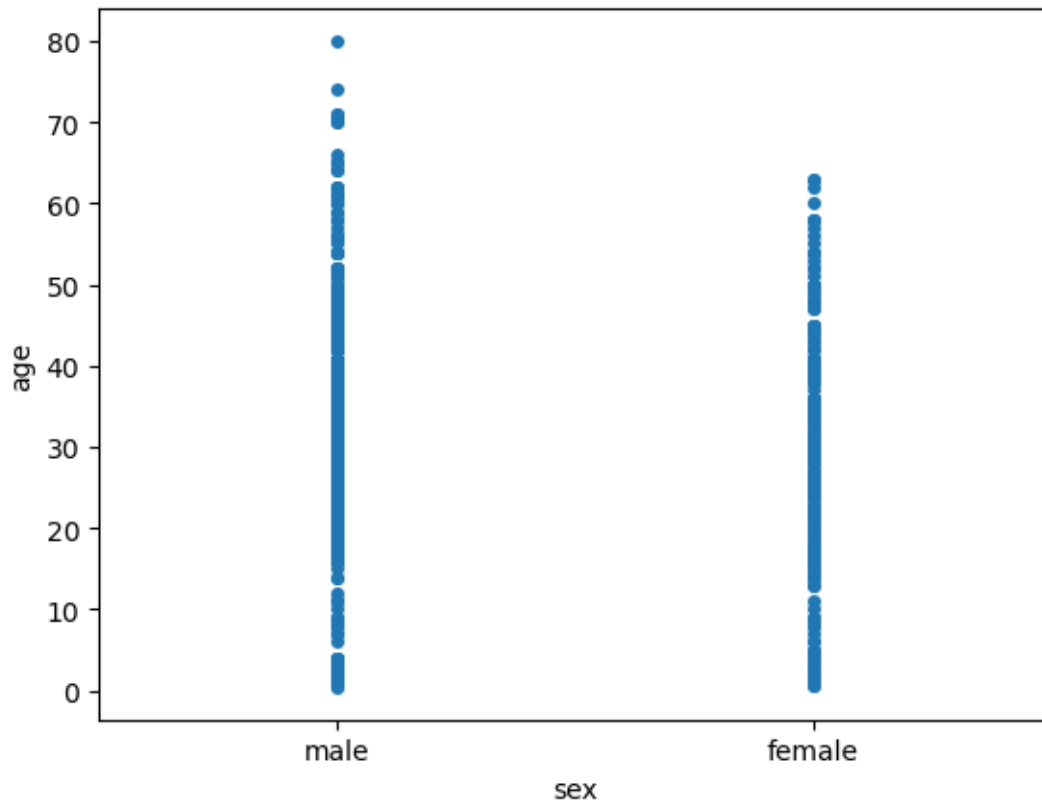
```
[16]: <Axes: xlabel='sex', ylabel='age'>
```

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

C:\Users\System21\anaconda3\Lib\site-packages\seaborn_oldcore.py:1119:
FutureWarning: use_inf_as_na option is deprecated and will be removed in a
future version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
C:\Users\System21\anaconda3\Lib\site-packages\seaborn_oldcore.py:1119:
FutureWarning: use_inf_as_na option is deprecated and will be removed in a
future version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):

[17]: <Axes: xlabel='sex', ylabel='age'>

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

```
C:\Users\System21\anaconda3\Lib\site-packages\seaborn\_oldcore.py:1119:
FutureWarning: use_inf_as_na option is deprecated and will be removed in a
future version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
C:\Users\System21\anaconda3\Lib\site-packages\seaborn\_oldcore.py:1119:
FutureWarning: use_inf_as_na option is deprecated and will be removed in a
future version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
```
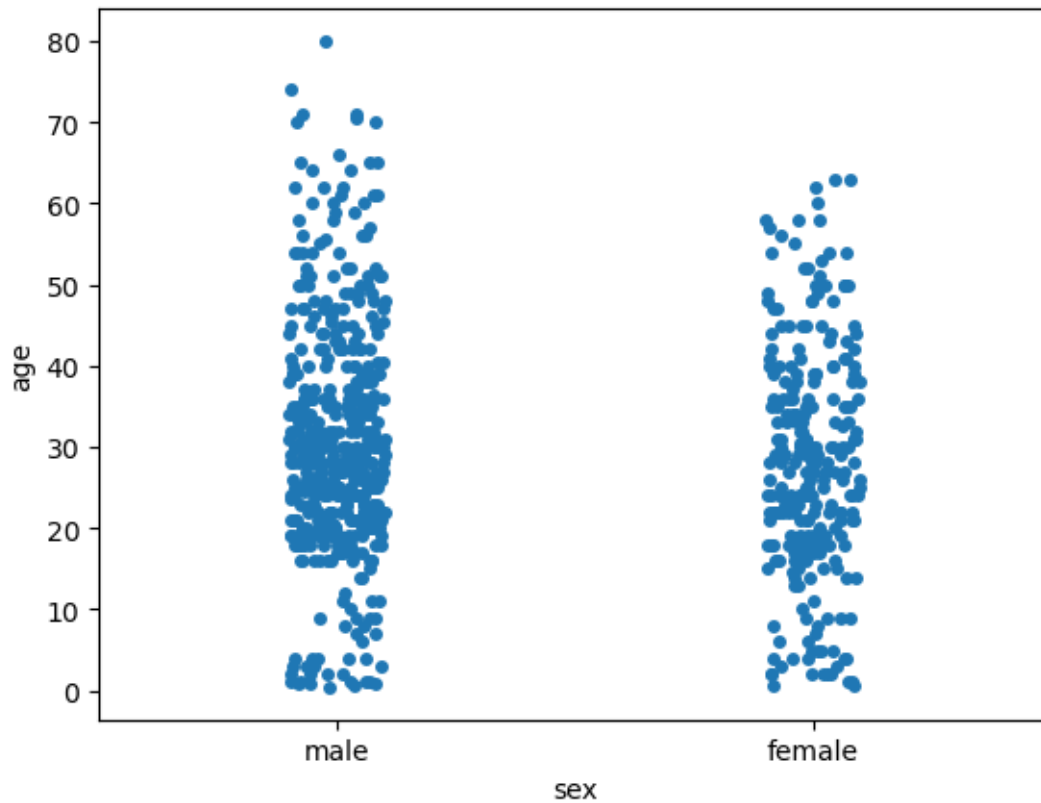
[18]: `<Axes: xlabel='sex', ylabel='age'>`

```
[19]: sns.stripplot(x='sex', y='age', data=dataset, jitter=True, hue="survived")
```

```
C:\Users\System21\anaconda3\Lib\site-packages\seaborn\_oldcore.py:1119:
FutureWarning: use_inf_as_na option is deprecated and will be removed in a
future version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
C:\Users\System21\anaconda3\Lib\site-packages\seaborn\_oldcore.py:1119:
FutureWarning: use_inf_as_na option is deprecated and will be removed in a
future version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
```
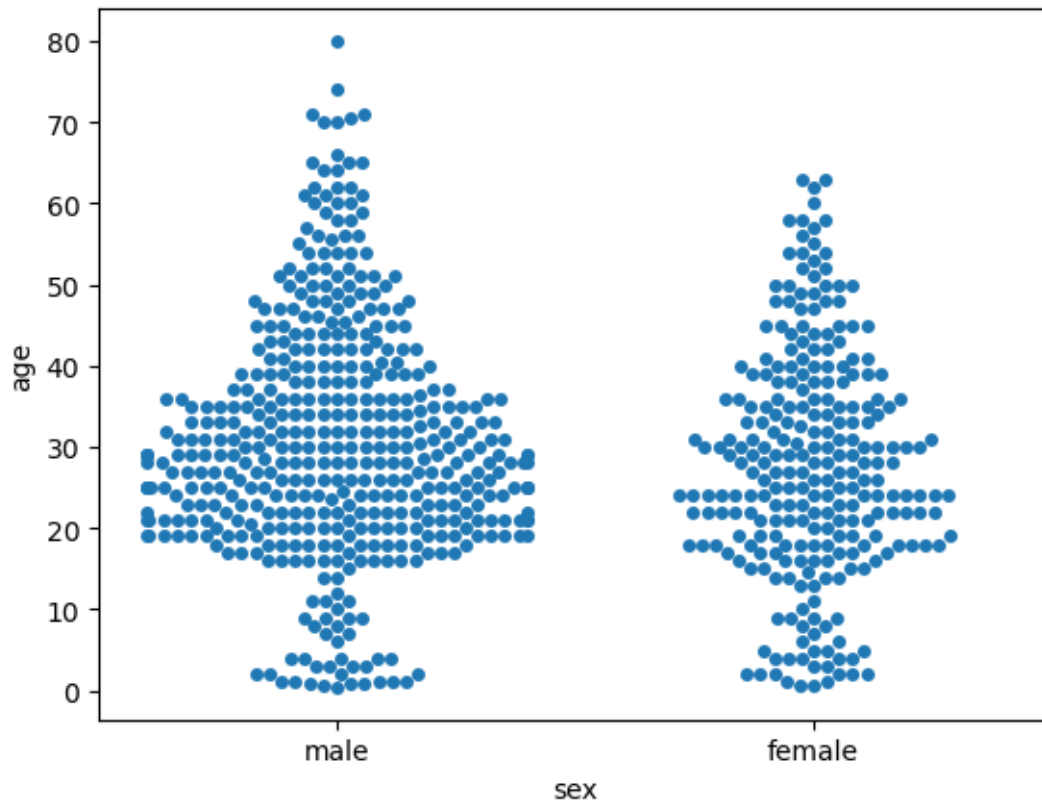
```
[19]: <Axes: xlabel='sex', ylabel='age'>
```
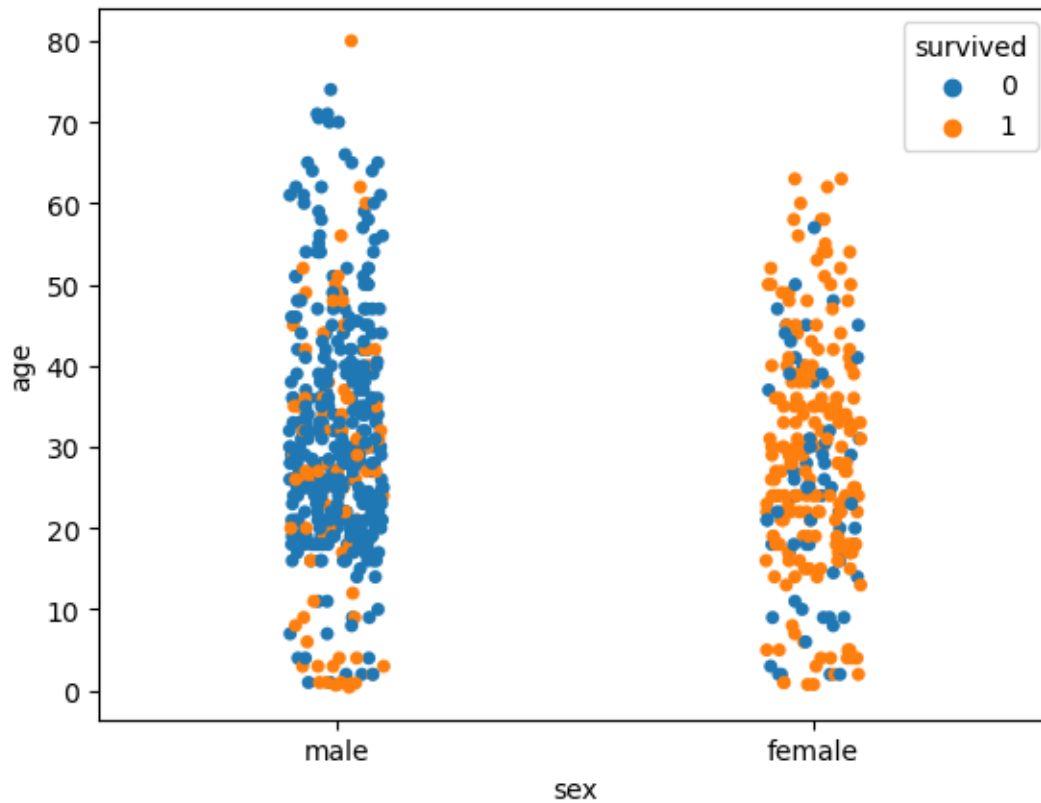
```
[20]: sns.swarmplot(x='sex', y='age', data=dataset)
```

C:\Users\System21\anaconda3\Lib\site-packages\seaborn_oldcore.py:1119:
FutureWarning: use_inf_as_na option is deprecated and will be removed in a
future version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
C:\Users\System21\anaconda3\Lib\site-packages\seaborn_oldcore.py:1119:
FutureWarning: use_inf_as_na option is deprecated and will be removed in a
future version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):

```
[20]: <Axes: xlabel='sex', ylabel='age'>
```

```
[21]: sns.swarmplot(x='sex', y='age', data=dataset, hue="survived")
```

C:\Users\System21\anaconda3\Lib\site-packages\seaborn_oldcore.py:1119:
FutureWarning: use_inf_as_na option is deprecated and will be removed in a
future version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
C:\Users\System21\anaconda3\Lib\site-packages\seaborn_oldcore.py:1119:
FutureWarning: use_inf_as_na option is deprecated and will be removed in a
future version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
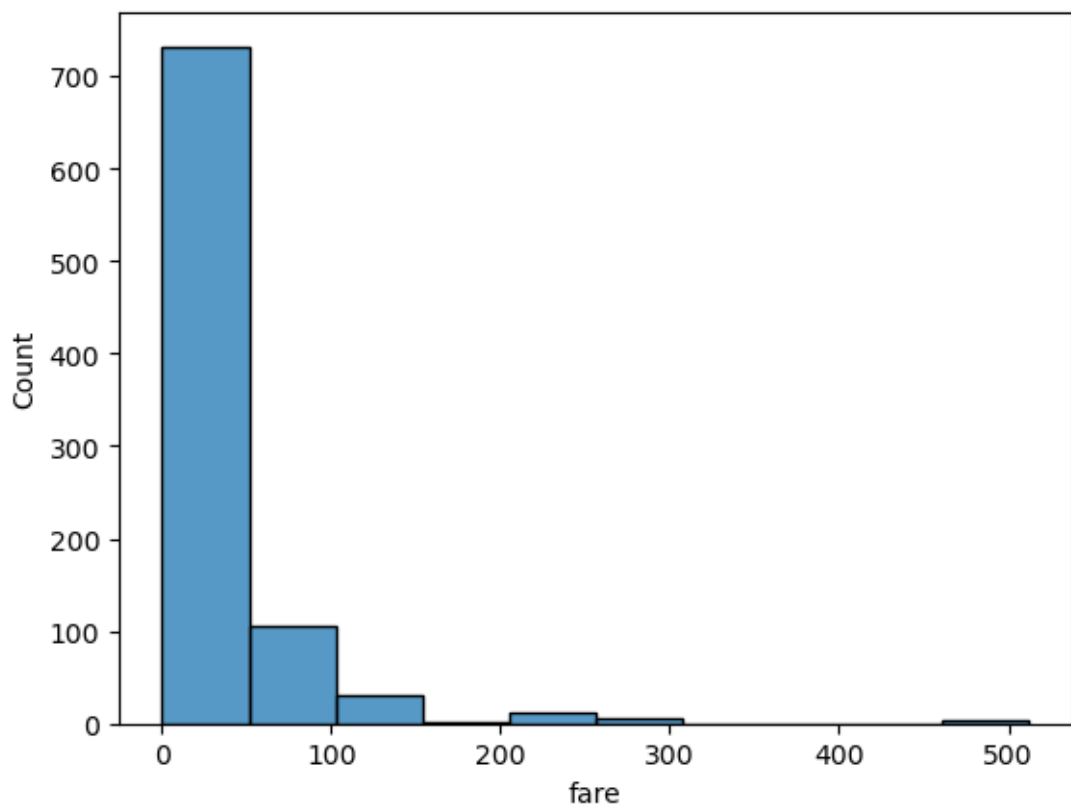
```
[21]: <Axes: xlabel='sex', ylabel='age'>
```
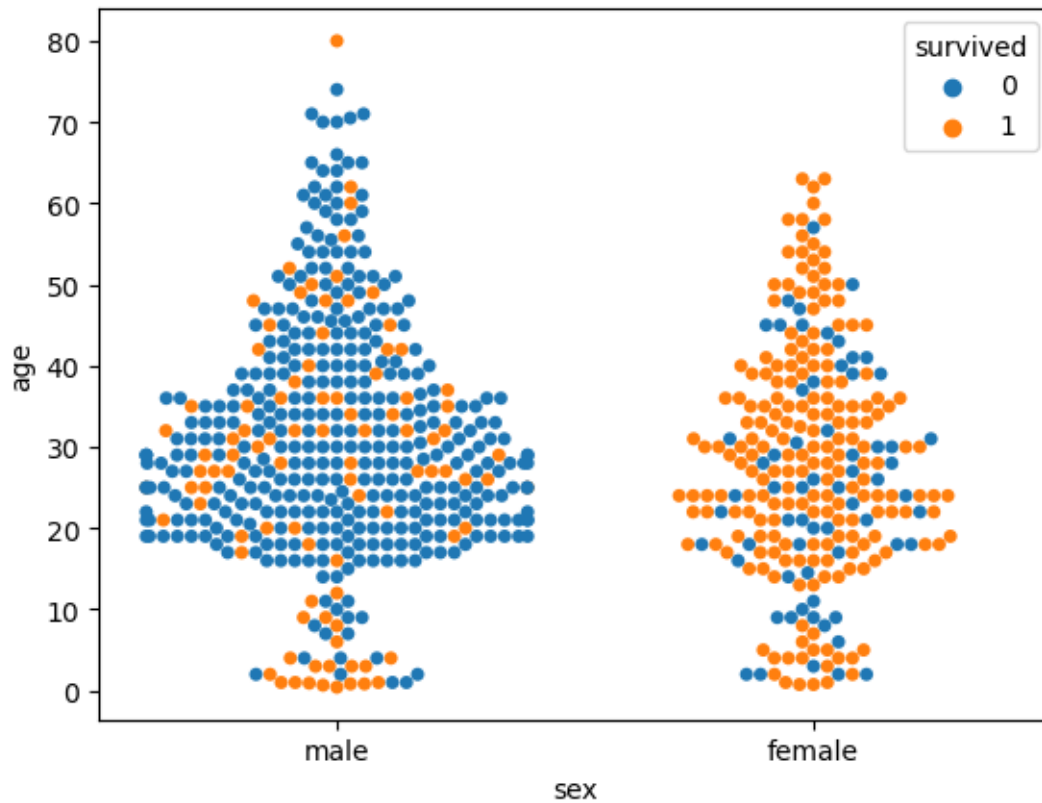
```
[22]: import seaborn as sns
      dataset = sns.load_dataset('titanic')
      sns.histplot(dataset["fare"], kde=False, bins=10)
```

C:\Users\System21\anaconda3\Lib\site-packages\seaborn_oldcore.py:1119:
FutureWarning: use_inf_as_na option is deprecated and will be removed in a
future version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):

```
[22]: <Axes: xlabel='fare', ylabel='Count'>
```

```
[23]: dataset.corr(numeric_only = True)
```

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

                  adult_male     alone
      survived     -0.557080 -0.203367
      pclass        0.094035  0.135207
      age           0.280328  0.198270
      sibsp        -0.253586 -0.584471
      parch        -0.349943 -0.583398
      fare         -0.182024 -0.271832
      adult_male    1.000000  0.404744
      alone         0.404744  1.000000
```
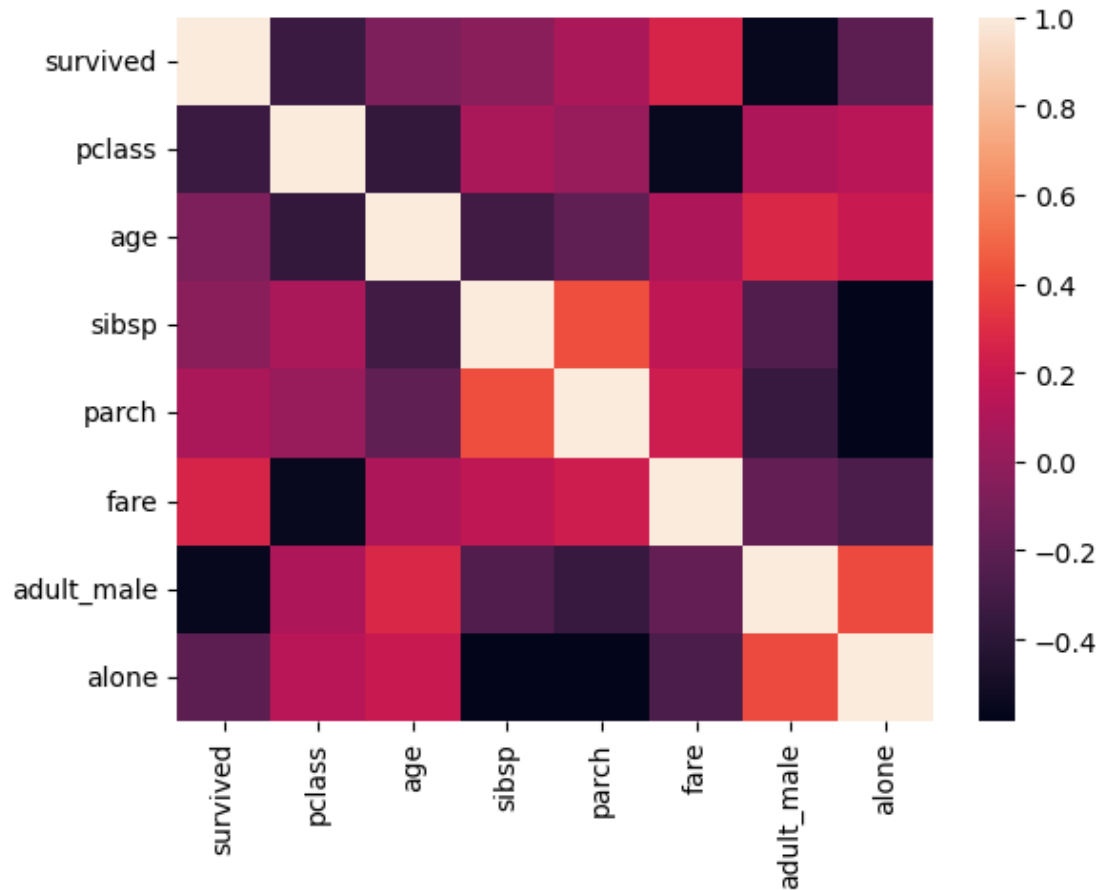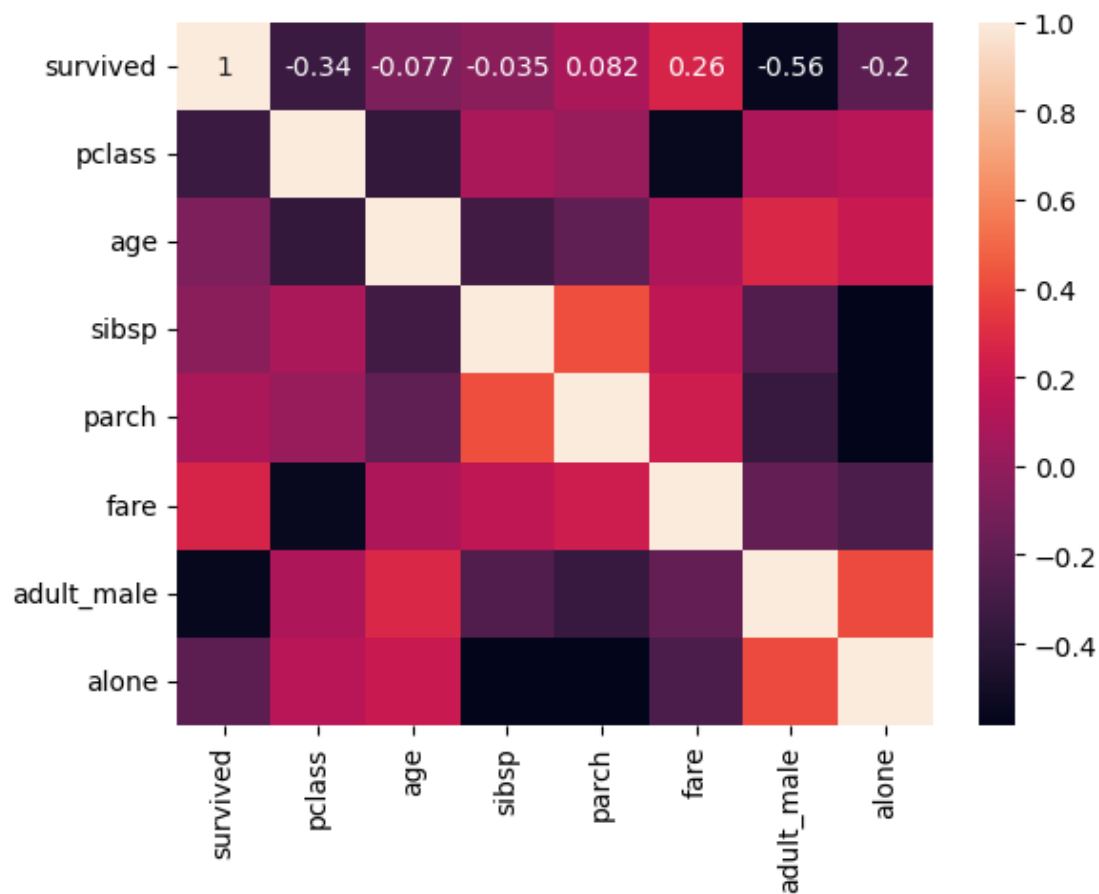
```
[24]: corr= dataset.corr(numeric_only = True)
      sns.heatmap(corr)
```

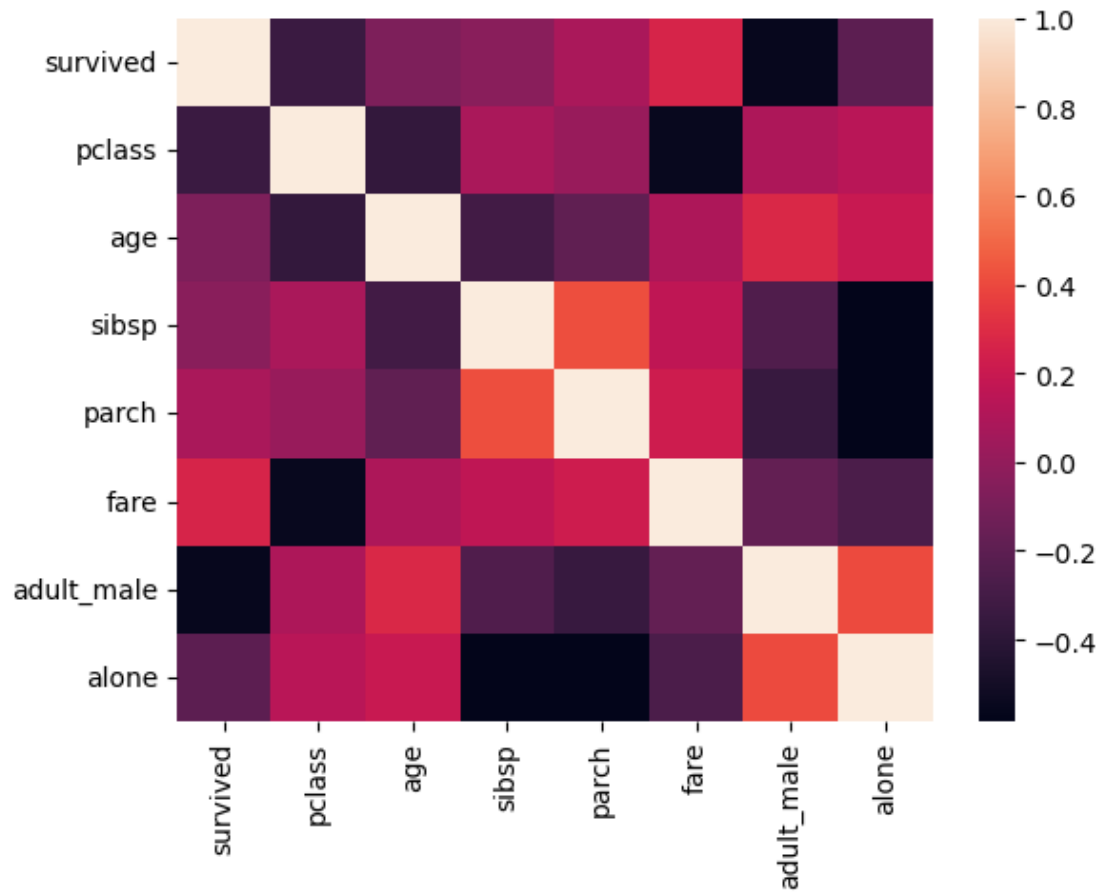[24]: <Axes: >


```
[25]: corr = dataset.corr(numeric_only = True)
      sns.heatmap(corr, annot=True)
```

[25]: <Axes: >

```
[26]: corr = dataset.corr(numeric_only = True)
      sns.heatmap(corr)
```

[26]: <Axes: >

```
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     Roll No-13171
     Div-A
     PR-8
```