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

```
df = sns.load_dataset('titanic')
```

```
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 891 entries, 0 to 890
Data columns (total 15 columns):
 #   Column       Non-Null Count  Dtype   
---  ------       --------------  -----   
 0   survived     891 non-null    int64   
 1   pclass       891 non-null    int64   
 2   sex          891 non-null    object  
 3   age          714 non-null    float64 
 4   sibsp        891 non-null    int64   
 5   parch        891 non-null    int64   
 6   fare         891 non-null    float64 
 7   embarked     889 non-null    object  
 8   class        891 non-null    category
 9   who          891 non-null    object  
 10  adult_male   891 non-null    bool    
 11  deck         203 non-null    category
 12  embark_town  889 non-null    object  
 13  alive        891 non-null    object  
 14  alone        891 non-null    bool    
dtypes: bool(2), category(2), float64(2), int64(4), object(5)
memory usage: 80.7+ KB
```

```
df.describe()
```

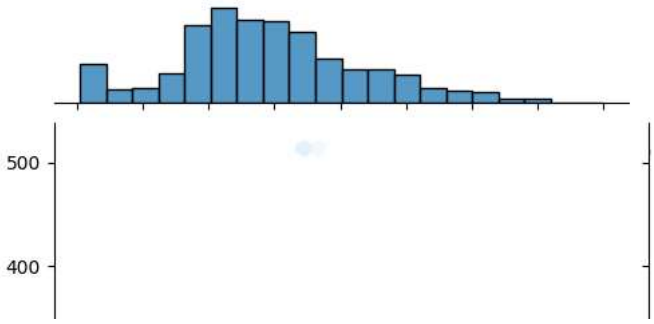
| | survived | pclass | age | sibsp | parch | fare |
|---|---|---|---|---|---|---|
| **count** | 891.000000 | 891.000000 | 714.000000 | 891.000000 | 891.000000 | 891.000000 |
| **mean** | 0.383838 | 2.308642 | 29.699118 | 0.523008 | 0.381594 | 32.204208 |
| **std** | 0.486592 | 0.836071 | 14.526497 | 1.102743 | 0.806057 | 49.693429 |
| **min** | 0.000000 | 1.000000 | 0.420000 | 0.000000 | 0.000000 | 0.000000 |
| **25%** | 0.000000 | 2.000000 | 20.125000 | 0.000000 | 0.000000 | 7.910400 |
| **50%** | 0.000000 | 3.000000 | 28.000000 | 0.000000 | 0.000000 | 14.454200 |
| **75%** | 1.000000 | 3.000000 | 38.000000 | 1.000000 | 0.000000 | 31.000000 |
| **max** | 1.000000 | 3.000000 | 80.000000 | 8.000000 | 6.000000 | 512.329200 |

```
df.shape
```

```
(891, 15)
```

```
sns.jointplot(x='age', y='fare', data=df, kind='hex')
```

```
<seaborn.axisgrid.JointGrid at 0x7f6766d47d30>
```

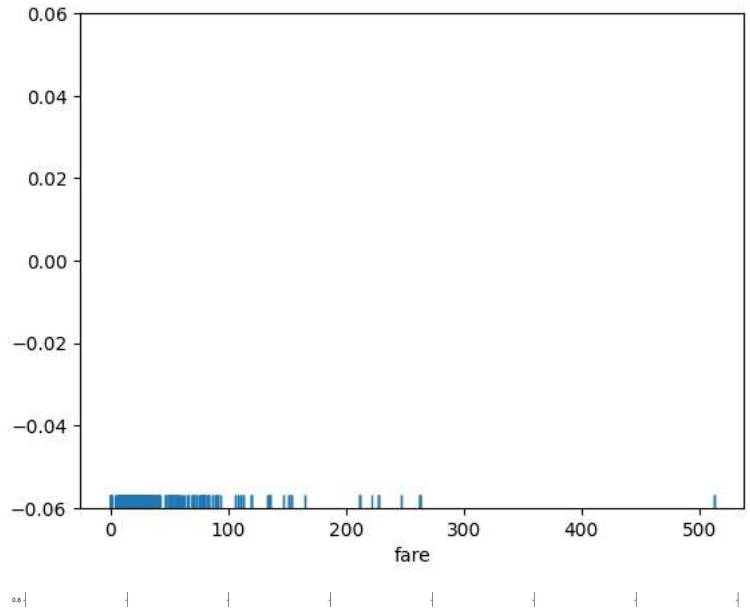



```
sns.pairplot(df)
```

```
<__array_function__ internals>:180: RuntimeWarning: Converting input from bool to
<__array_function__ internals>:180: RuntimeWarning: Converting input from bool to
<seaborn.axisgrid.PairGrid at 0x7f52cc9175b0>
```

```
sns.rugplot(df["fare"])
```

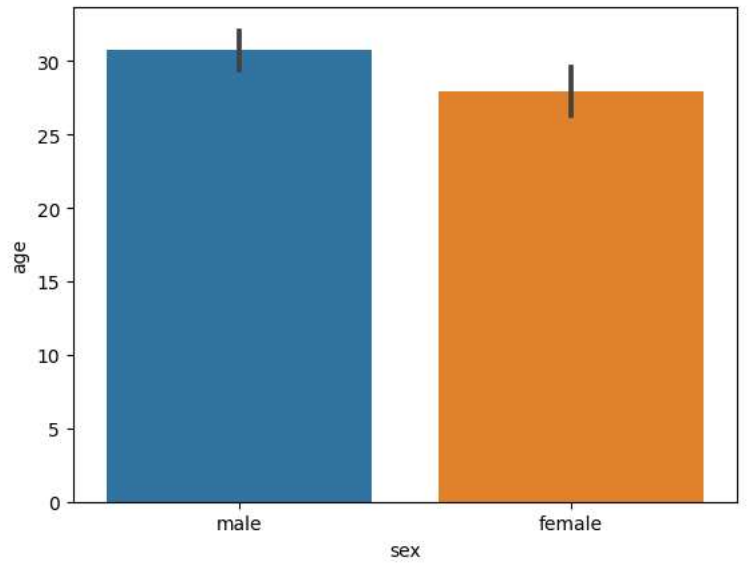
```
<Axes: xlabel='fare'>
```






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

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

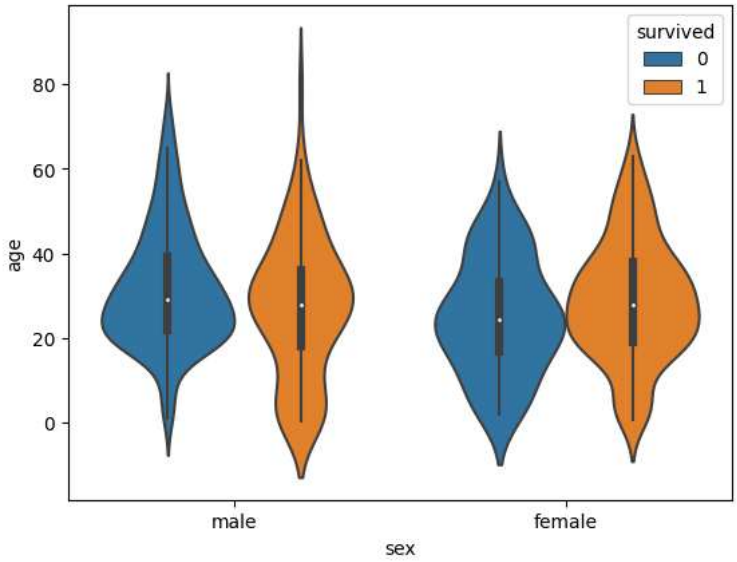



```
sns.countplot(x='sex', data=df)
```

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

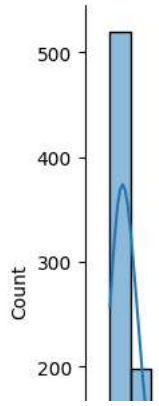

```
sns.violinplot(x='sex', y='age', data=df, hue='survived')
```

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



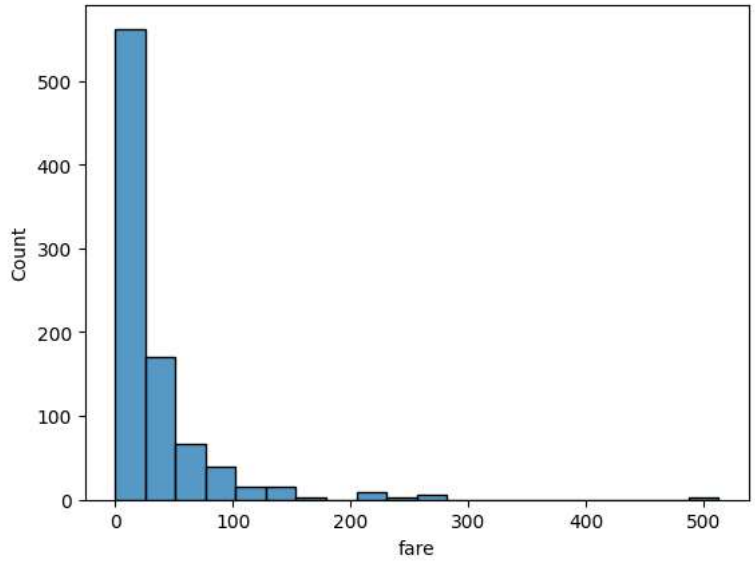

```
sns.displot(df['fare'], kde=True, bins=25)
```

```
<seaborn.axisgrid.FacetGrid at 0x7f52c4c078b0>
```




```
sns.histplot(data=df, x='fare', bins=20)
```

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

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