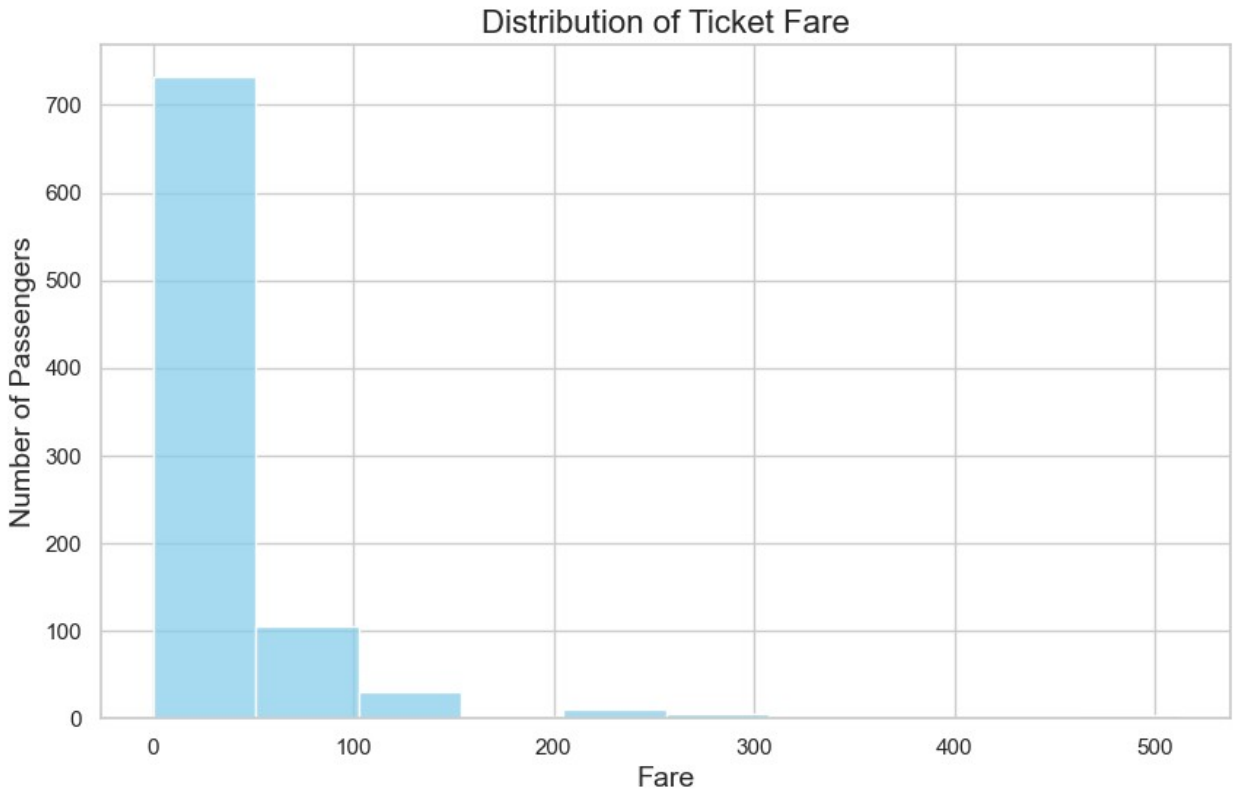
```
!pip install seaborn
```

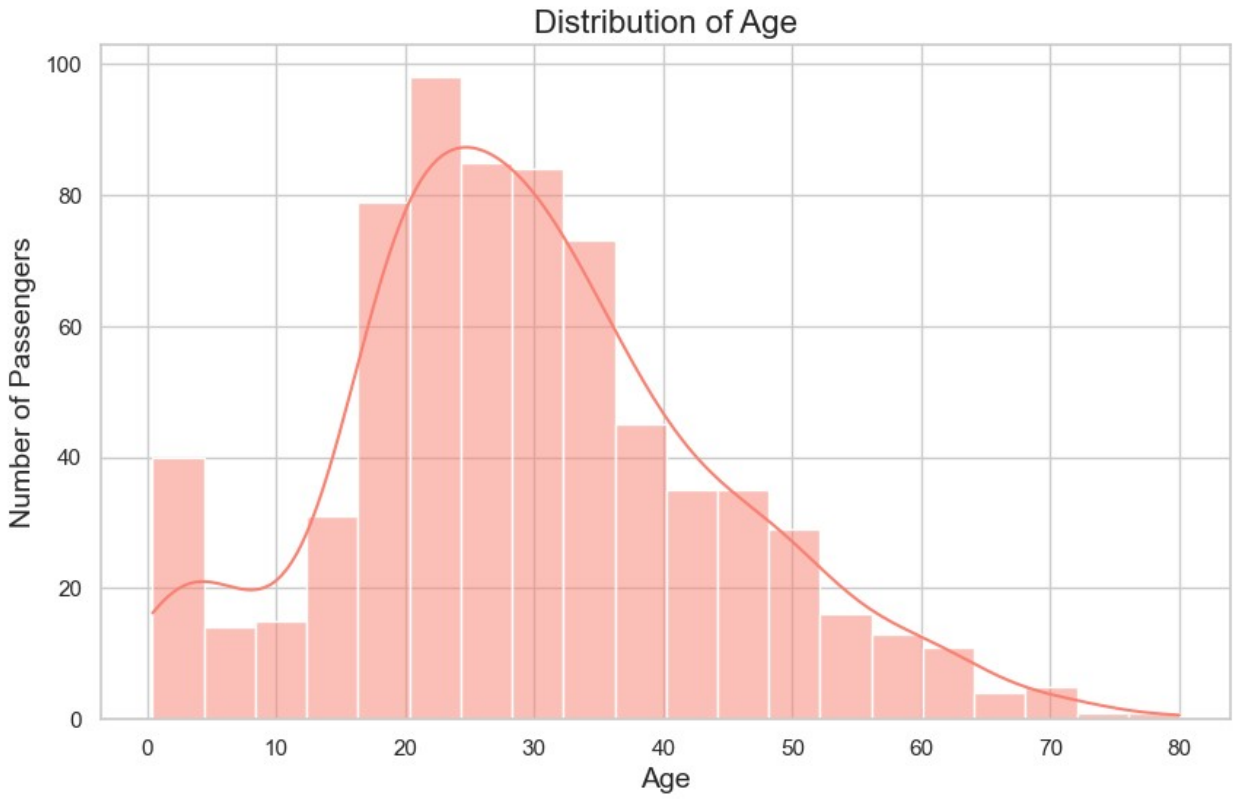
```
Defaulting to user installation because normal site-packages is not
writeable
Requirement already satisfied: seaborn in c:\users\kedar\appdata\
roaming\python\python312\site-packages (0.13.2)
Requirement already satisfied: numpy!=1.24.0,>=1.20 in c:\users\kedar\
appdata\roaming\python\python312\site-packages (from seaborn) (2.1.2)
Requirement already satisfied: pandas>=1.2 in c:\users\kedar\appdata\
roaming\python\python312\site-packages (from seaborn) (2.2.3)
Requirement already satisfied: matplotlib!=3.6.1,>=3.4 in c:\users\
kedar\appdata\roaming\python\python312\site-packages (from seaborn)
(3.10.0)
Requirement already satisfied: contourpy>=1.0.1 in c:\users\kedar\
appdata\roaming\python\python312\site-packages (from matplotlib!
=3.6.1,>=3.4->seaborn) (1.3.1)
Requirement already satisfied: cycler>=0.10 in c:\users\kedar\appdata\
roaming\python\python312\site-packages (from matplotlib!=3.6.1,>=3.4-
>seaborn) (0.12.1)
Requirement already satisfied: fonttools>=4.22.0 in c:\users\kedar\
appdata\roaming\python\python312\site-packages (from matplotlib!
=3.6.1,>=3.4->seaborn) (4.55.7)
Requirement already satisfied: kiwisolver>=1.3.1 in c:\users\kedar\
appdata\roaming\python\python312\site-packages (from matplotlib!
=3.6.1,>=3.4->seaborn) (1.4.8)
Requirement already satisfied: packaging>=20.0 in c:\users\kedar\
appdata\roaming\python\python312\site-packages (from matplotlib!
=3.6.1,>=3.4->seaborn) (24.2)
Requirement already satisfied: pillow>=8 in c:\users\kedar\appdata\
roaming\python\python312\site-packages (from matplotlib!=3.6.1,>=3.4-
>seaborn) (11.0.0)
Requirement already satisfied: pyparsing>=2.3.1 in c:\users\kedar\
appdata\roaming\python\python312\site-packages (from matplotlib!
=3.6.1,>=3.4->seaborn) (3.2.1)
Requirement already satisfied: python-dateutil>=2.7 in c:\users\kedar\
appdata\roaming\python\python312\site-packages (from matplotlib!
=3.6.1,>=3.4->seaborn) (2.9.0.post0)
Requirement already satisfied: pytz>=2020.1 in c:\users\kedar\appdata\
roaming\python\python312\site-packages (from pandas>=1.2->seaborn)
(2024.2)
Requirement already satisfied: tzdata>=2022.7 in c:\users\kedar\
appdata\roaming\python\python312\site-packages (from pandas>=1.2-
>seaborn) (2025.1)
Requirement already satisfied: six>=1.5 in c:\users\kedar\appdata\
roaming\python\python312\site-packages (from python-dateutil>=2.7-
>matplotlib!=3.6.1,>=3.4->seaborn) (1.17.0)
```

```
plt.figure(figsize=(10, 6))
sns.histplot(dataset['fare'], kde=False, bins=10, color='skyblue')
```

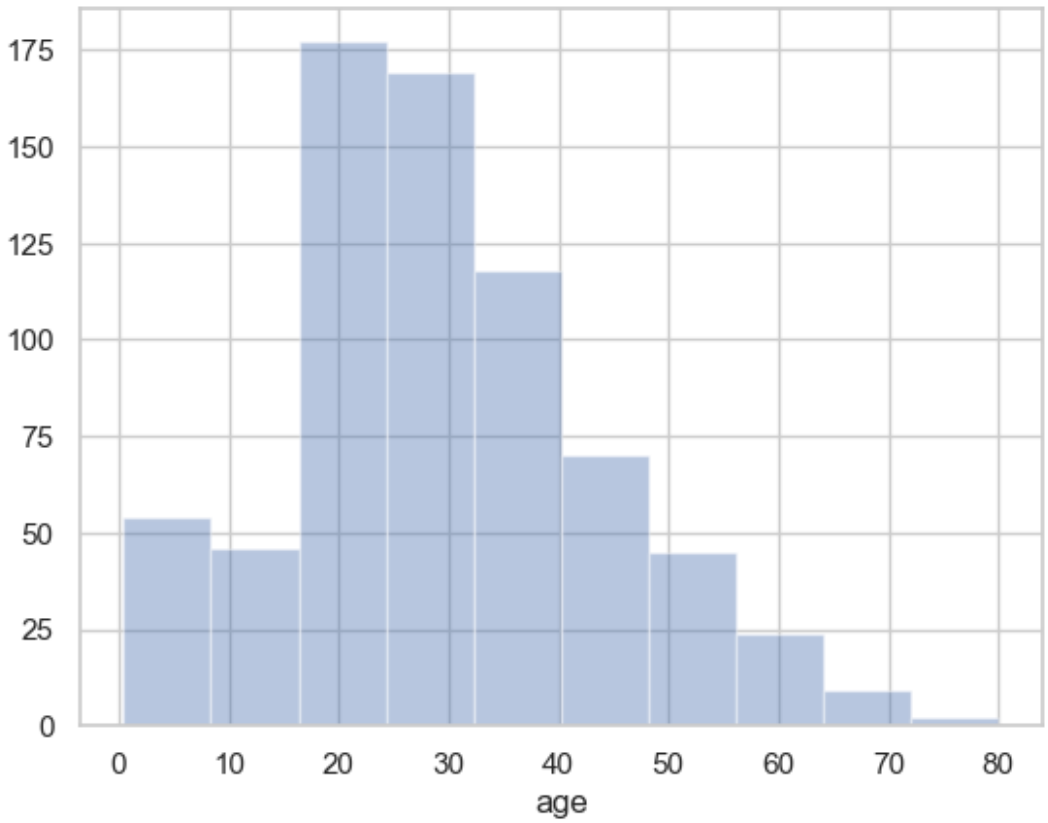
```
plt.title('Distribution of Ticket Fare', fontsize=16)
plt.xlabel('Fare', fontsize=14)
plt.ylabel('Number of Passengers', fontsize=14)
plt.show()
```




```
plt.figure(figsize=(10, 6))
sns.histplot(dataset['age'], kde=True, bins=20, color='salmon')
plt.title('Distribution of Age', fontsize=16)
plt.xlabel('Age', fontsize=14)
plt.ylabel('Number of Passengers', fontsize=14)
plt.show()
```

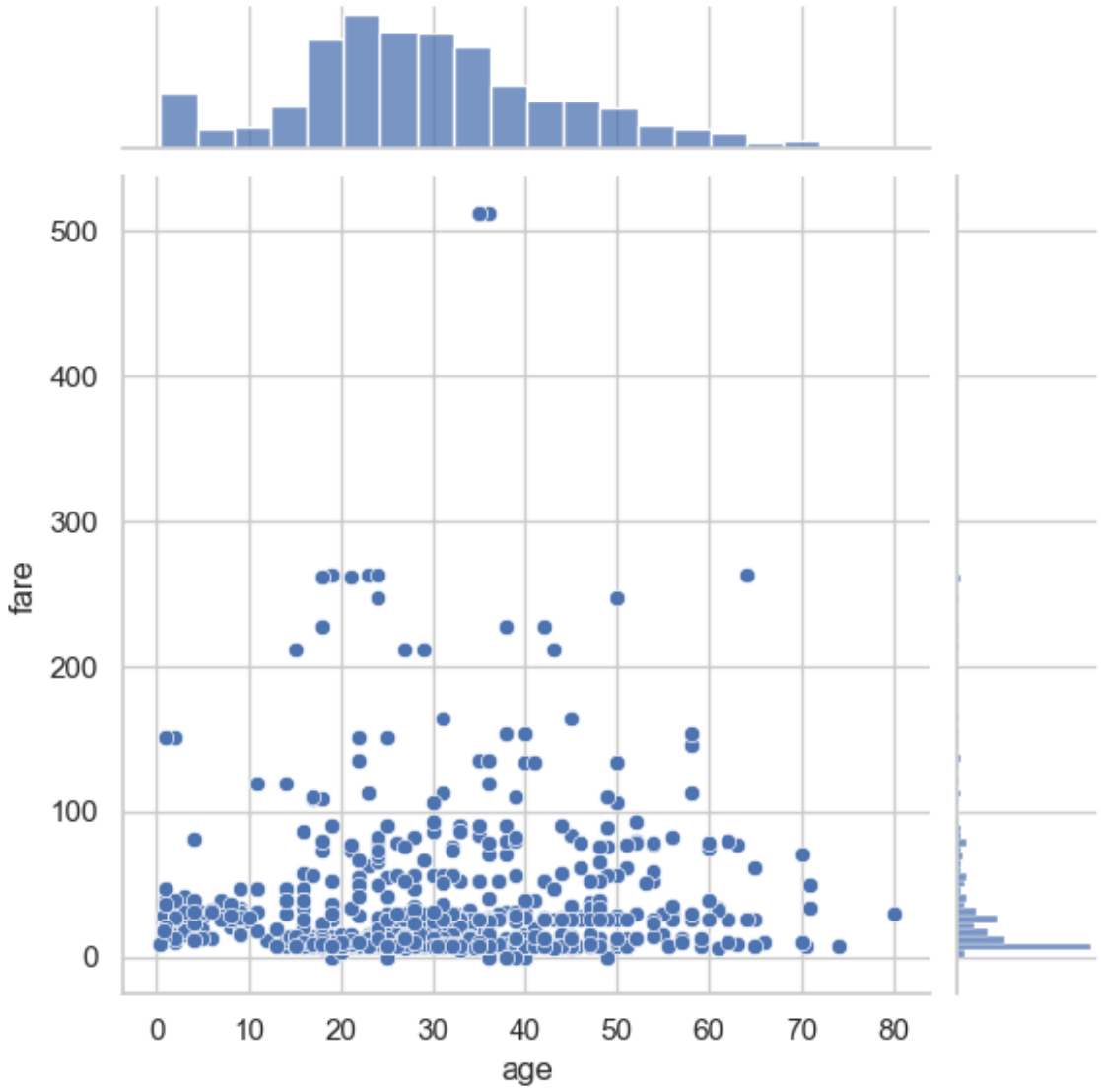



```
C:\Users\kedar\AppData\Local\Temp\ipykernel_19376\362036069.py:1:
UserWarning:

`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)

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




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

```
<seaborn.axisgrid.JointGrid at 0x1793f165010>
```




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

```
C:\Users\kedar\AppData\Local\Temp\ipykernel_19376\362036069.py:1:
UserWarning:

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https://gist.github.com/mwaskom/de44147ed2974457ad6372750bbe5751
```
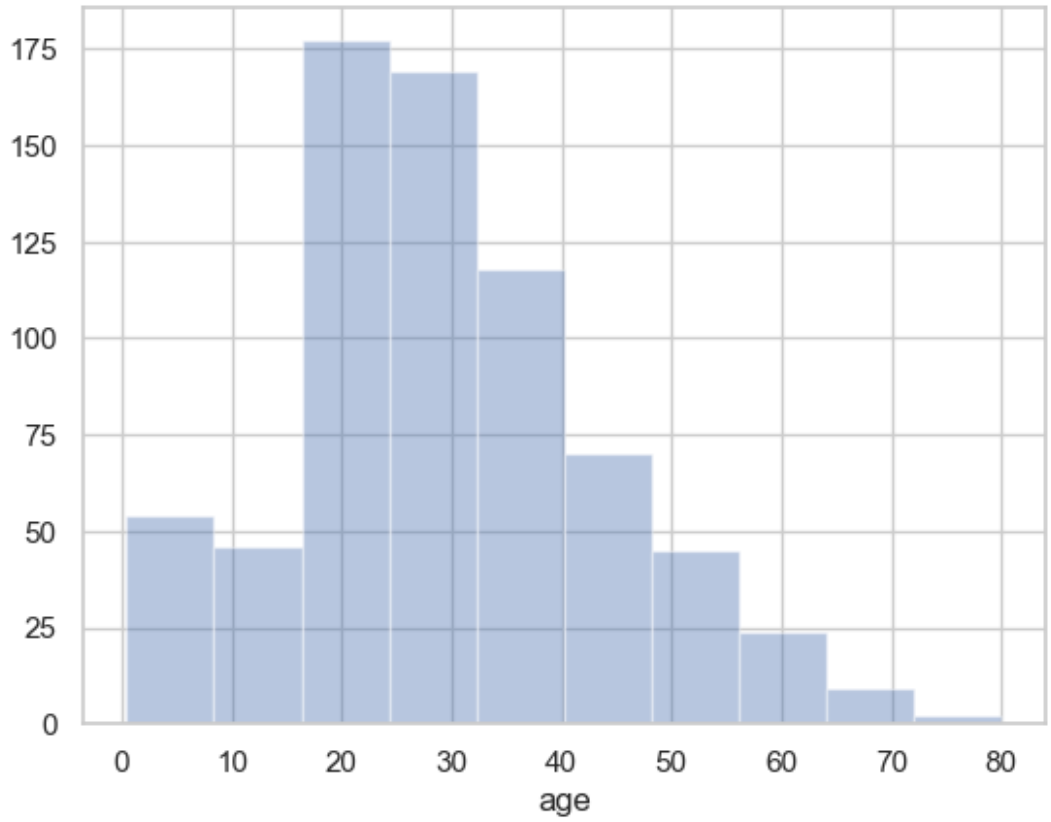
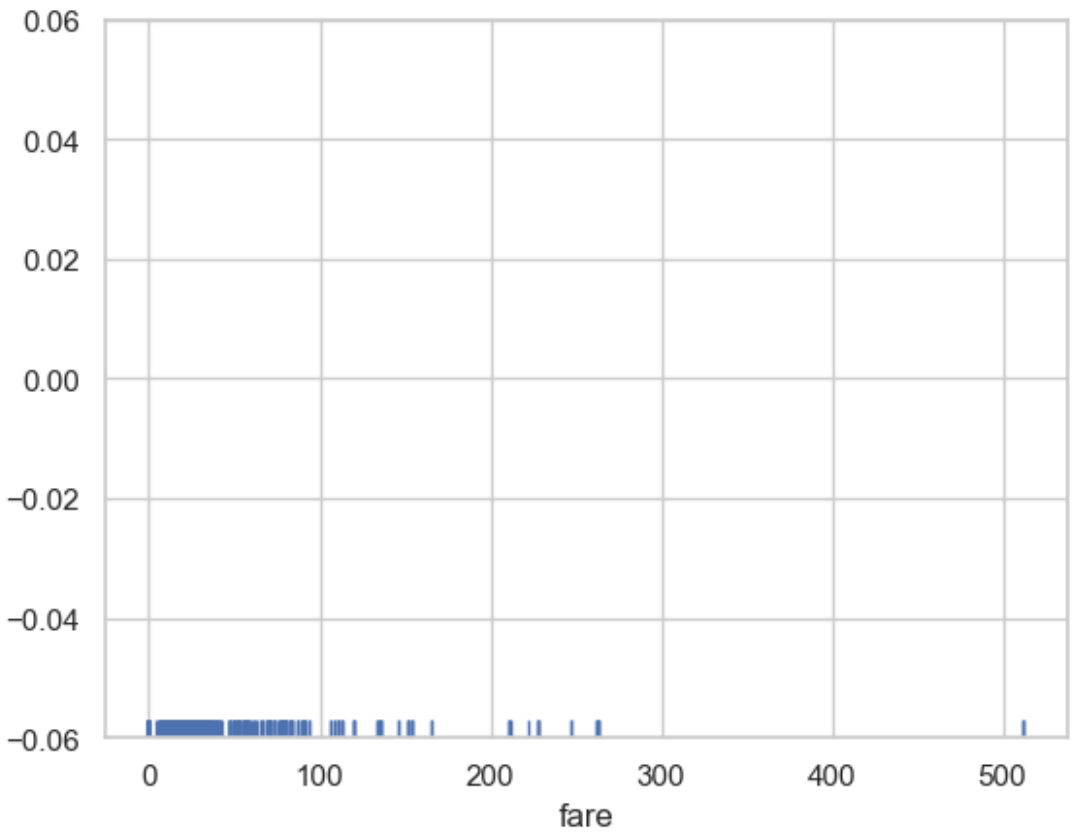

```
  sns.distplot(dataset['age'], bins=10, kde=False)
```

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



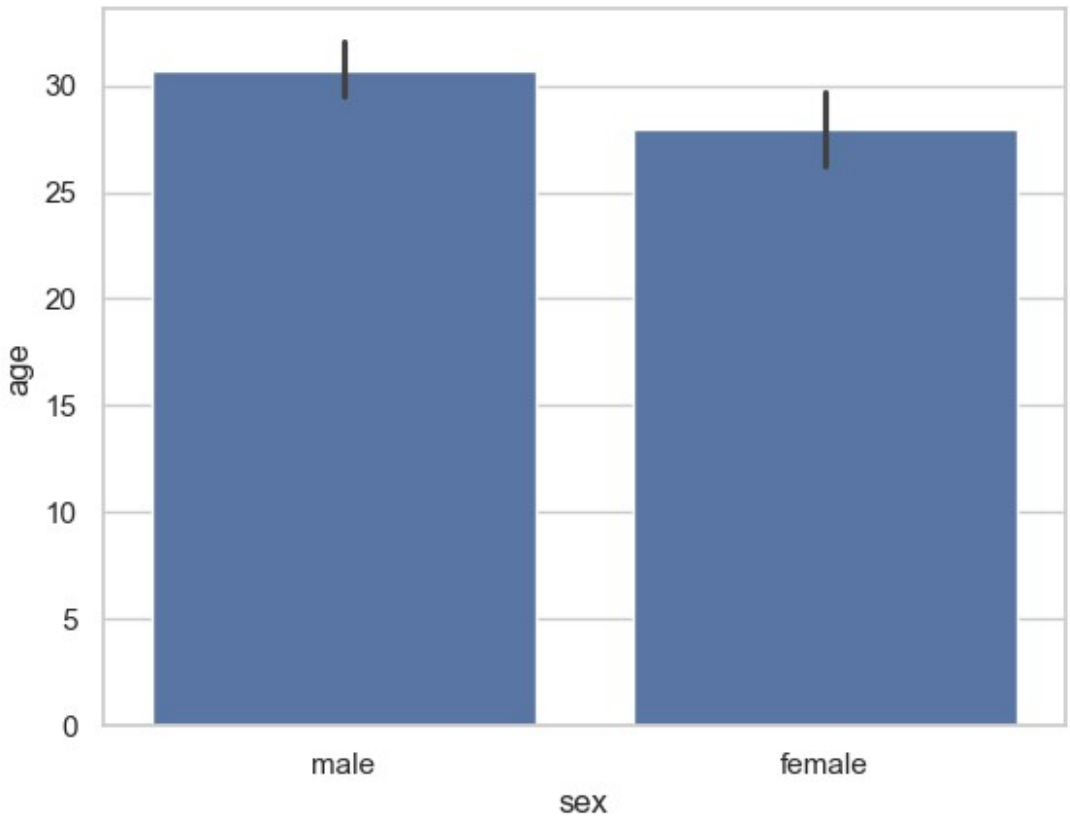

```
sns.rugplot(dataset['fare'])
```

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



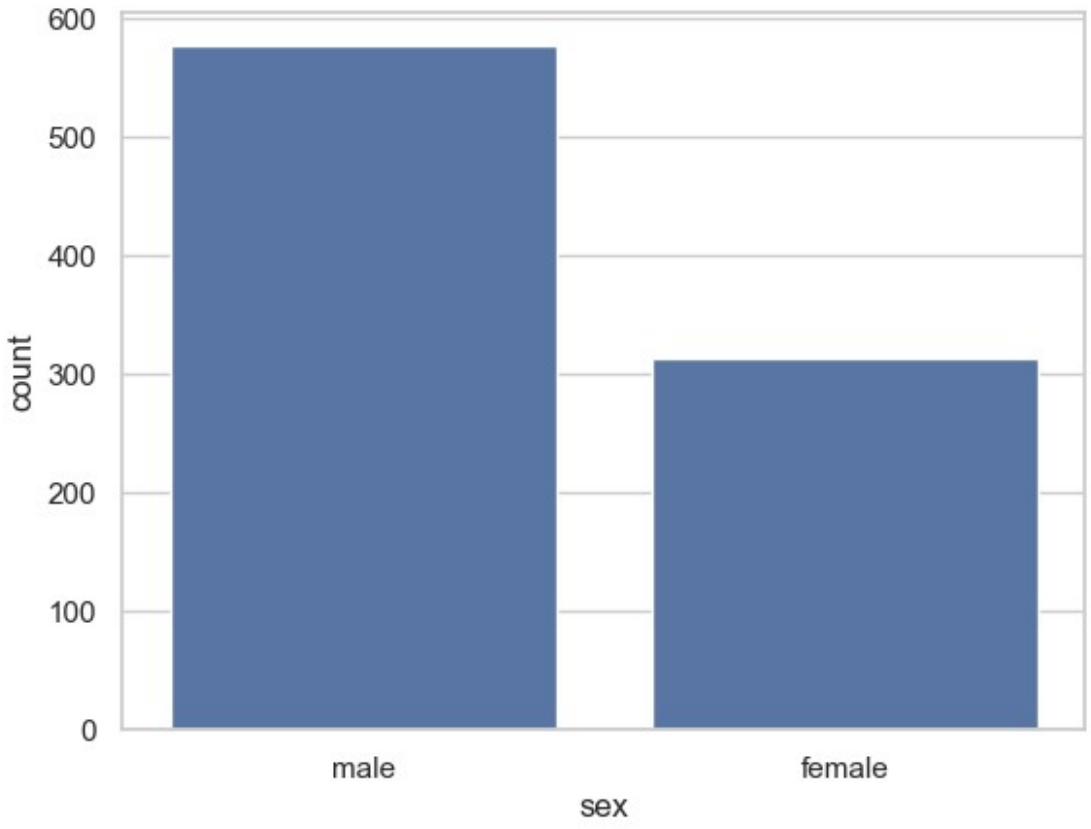

```
sns.barplot(x='sex', y='age', data=dataset)
```

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



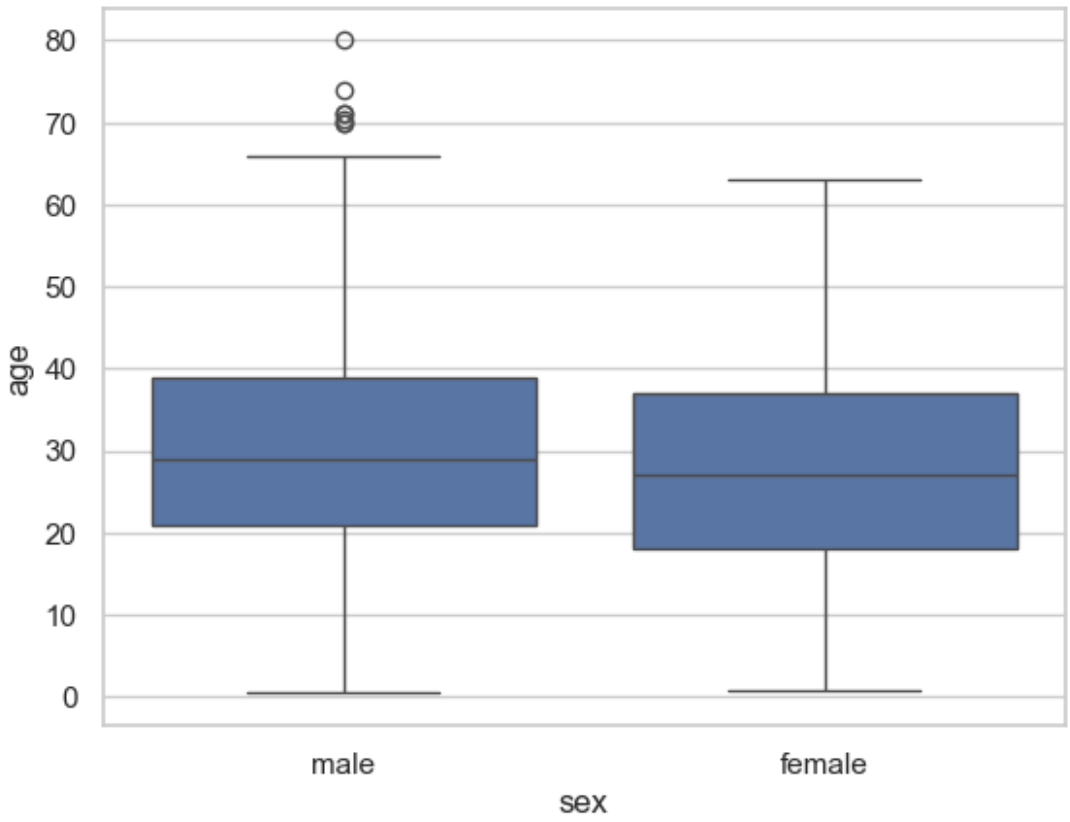

```
sns.countplot(x='sex', data=dataset)
```

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



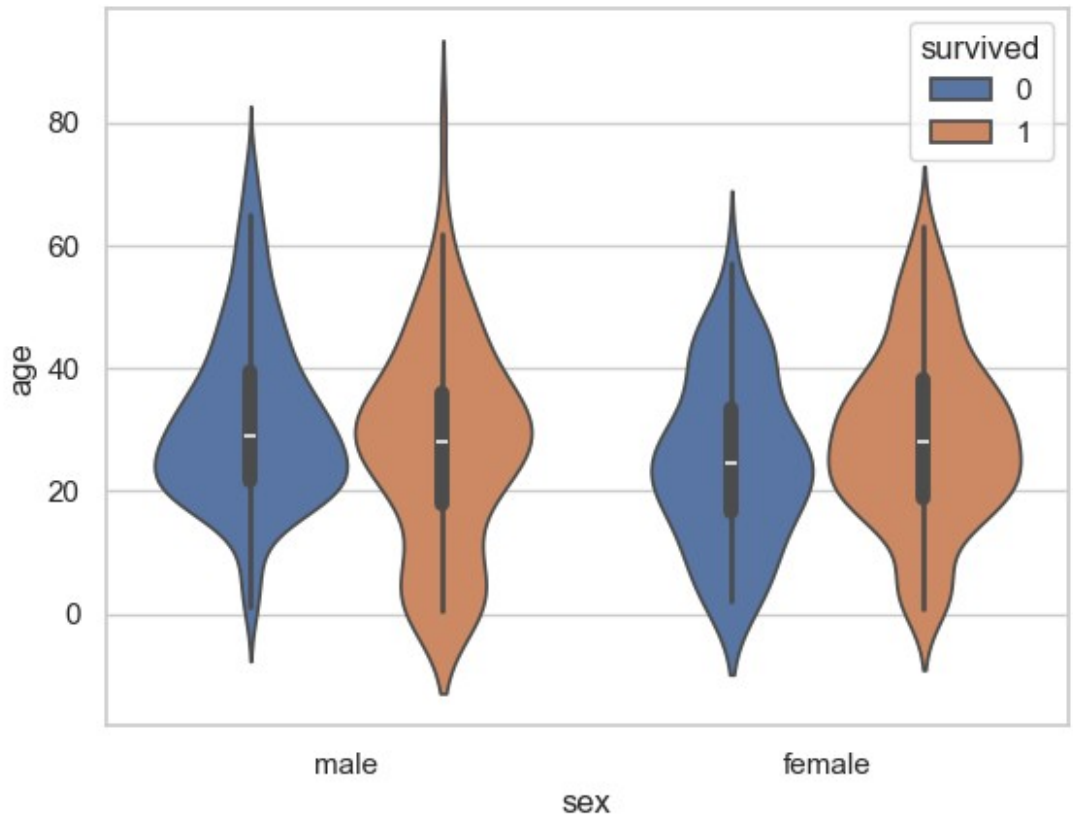

```
sns.boxplot(x='sex', y='age', data=dataset)
```

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

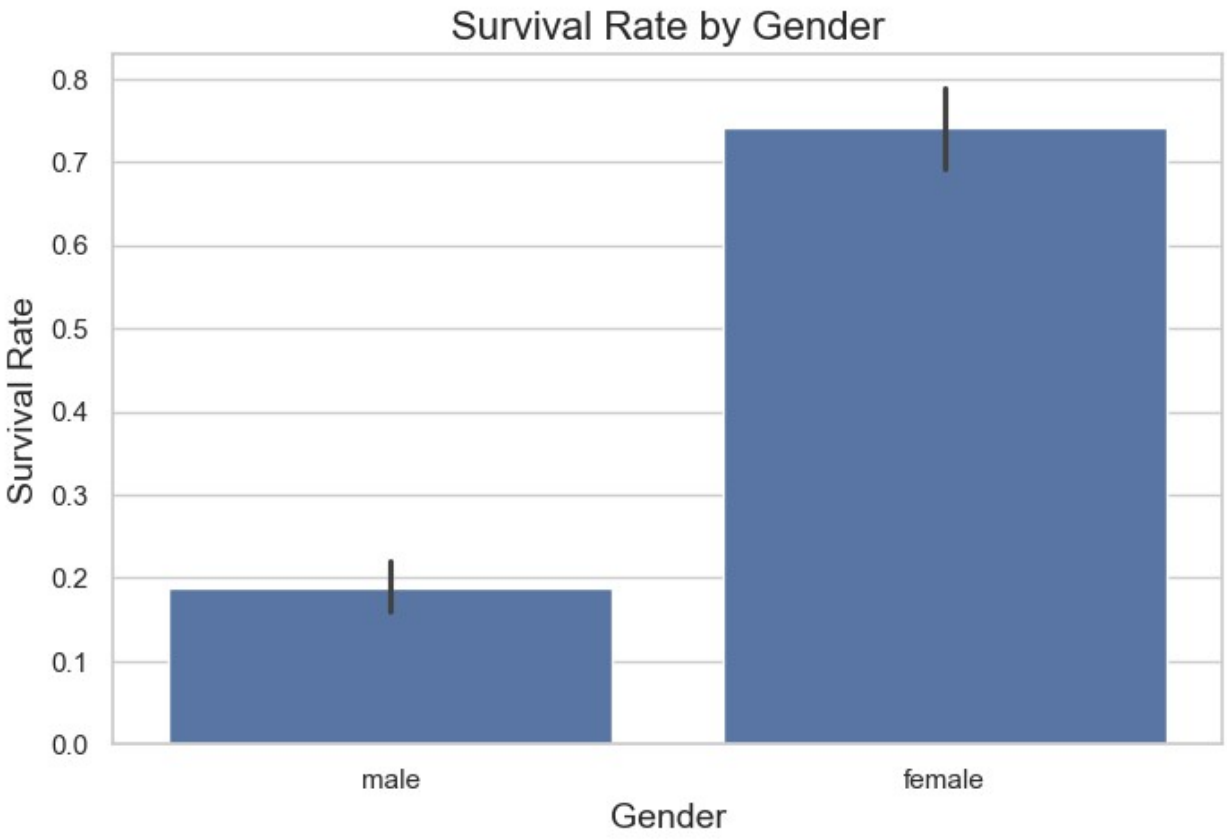



```
sns.violinplot(x='sex', y='age', data=dataset, hue='survived')
```

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

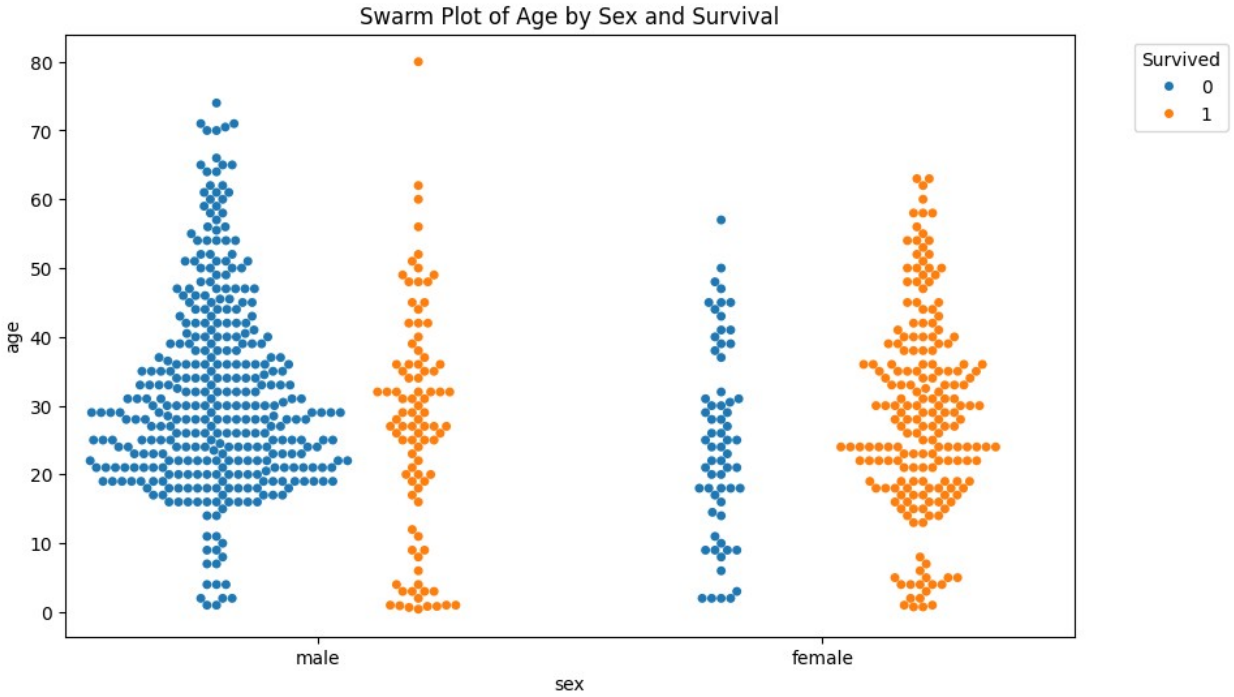



```
plt.figure(figsize=(8, 5))
sns.barplot(x='sex', y='survived', data=dataset)
plt.title('Survival Rate by Gender', fontsize=16)
plt.xlabel('Gender', fontsize=14)
plt.ylabel('Survival Rate', fontsize=14)
plt.show()
```




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

dataset = sns.load_dataset('titanic')

plt.figure(figsize=(10, 6))
sns.stripplot(x='sex', y='age', data=dataset, jitter=True,
hue='survived', dodge=True)
plt.title('Strip Plot of Age by Sex and Survival')
plt.legend(title='Survived', bbox_to_anchor=(1.05, 1), loc='upper
left')
plt.show()
```

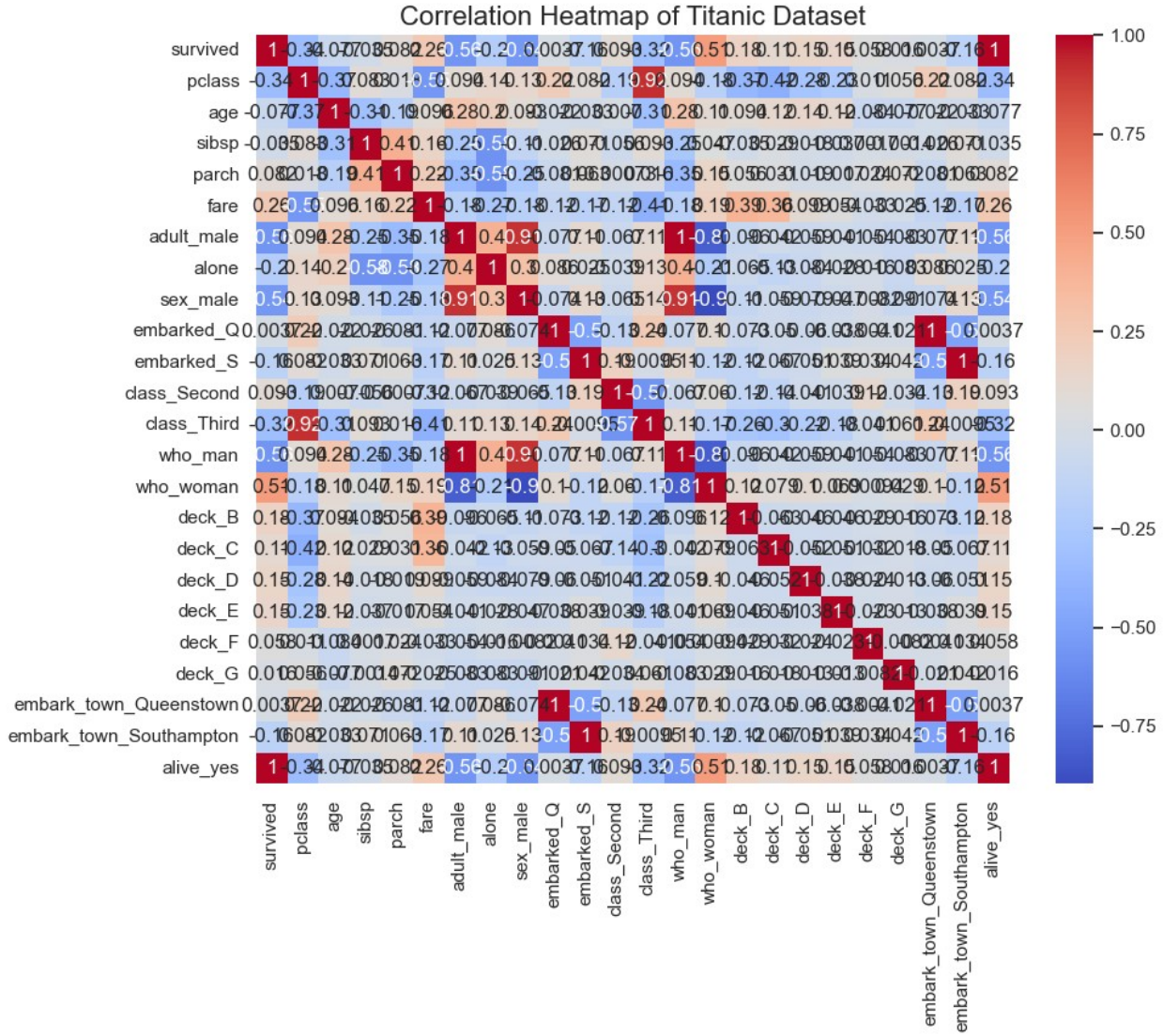

```
dataset = sns.load_dataset('titanic')

# Swarm Plot
plt.figure(figsize=(10, 6))
sns.swarmplot(x='sex', y='age', data=dataset, hue='survived',
dodge=True)
plt.title('Swarm Plot of Age by Sex and Survival')
plt.legend(title='Survived', bbox_to_anchor=(1.05, 1), loc='upper
left')
plt.show()
```



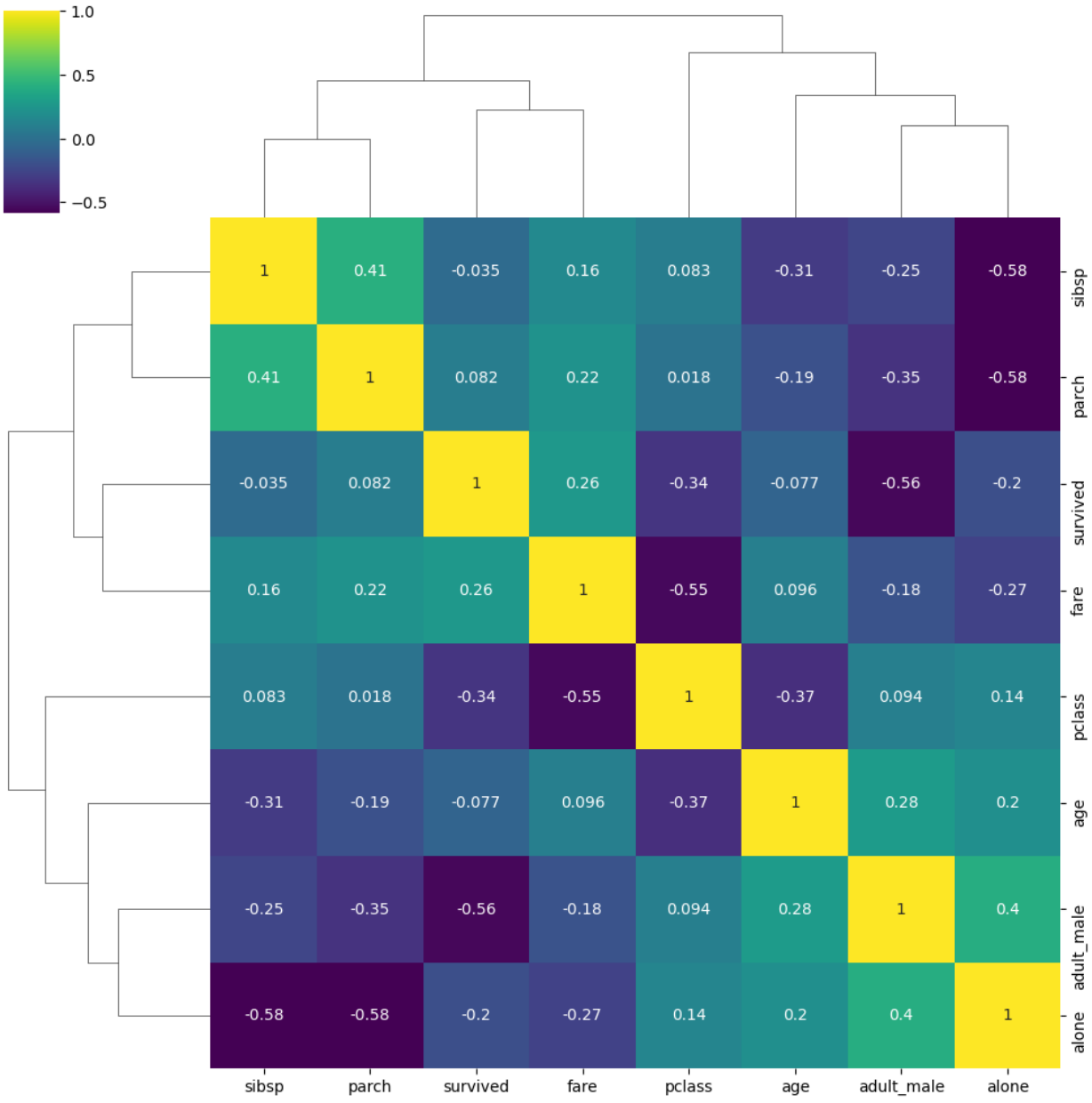

```
pip install --upgrade seaborn matplotlib

Defaulting to user installation because normal site-packages is not
writeable
Requirement already satisfied: seaborn in c:\users\kedar\appdata\
roaming\python\python313\site-packages (0.13.2)
Requirement already satisfied: matplotlib in c:\users\kedar\appdata\
roaming\python\python313\site-packages (3.10.0)
Requirement already satisfied: numpy!=1.24.0,>=1.20 in c:\users\kedar\
appdata\roaming\python\python313\site-packages (from seaborn) (2.2.2)
Requirement already satisfied: pandas>=1.2 in c:\users\kedar\appdata\
roaming\python\python313\site-packages (from seaborn) (2.2.3)
Requirement already satisfied: contourpy>=1.0.1 in c:\users\kedar\
appdata\roaming\python\python313\site-packages (from matplotlib)
(1.3.1)
Requirement already satisfied: cycler>=0.10 in c:\users\kedar\appdata\
roaming\python\python313\site-packages (from matplotlib) (0.12.1)
Requirement already satisfied: fonttools>=4.22.0 in c:\users\kedar\
appdata\roaming\python\python313\site-packages (from matplotlib)
(4.56.0)
Requirement already satisfied: kiwisolver>=1.3.1 in c:\users\kedar\
appdata\roaming\python\python313\site-packages (from matplotlib)
(1.4.8)
Requirement already satisfied: packaging>=20.0 in c:\users\kedar\
appdata\roaming\python\python313\site-packages (from matplotlib)
(24.2)
Requirement already satisfied: pillow>=8 in c:\users\kedar\appdata\
roaming\python\python313\site-packages (from matplotlib) (11.1.0)
```

```
Requirement already satisfied: pyparsing>=2.3.1 in c:\users\kedar\
appdata\roaming\python\python313\site-packages (from matplotlib)
(3.2.1)
Requirement already satisfied: python-dateutil>=2.7 in c:\users\kedar\
appdata\roaming\python\python313\site-packages (from matplotlib)
(2.9.0.post0)
Requirement already satisfied: pytz>=2020.1 in c:\users\kedar\appdata\
roaming\python\python313\site-packages (from pandas>=1.2->seaborn)
(2025.1)
Requirement already satisfied: tzdata>=2022.7 in c:\users\kedar\
appdata\roaming\python\python313\site-packages (from pandas>=1.2-
>seaborn) (2025.1)
Requirement already satisfied: six>=1.5 in c:\users\kedar\appdata\
roaming\python\python313\site-packages (from python-dateutil>=2.7-
>matplotlib) (1.17.0)
Note: you may need to restart the kernel to use updated packages.


[notice] A new release of pip is available: 24.2 -> 25.0.1
[notice] To update, run: python.exe -m pip install --upgrade pip
```

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

# Convert categorical columns to numeric using one-hot encoding
dataset_numeric = pd.get_dummies(dataset, drop_first=True)  # Convert
categorical data

# Compute correlation matrix
plt.figure(figsize=(10, 8))
corr = dataset_numeric.corr()  # Use the transformed dataset
sns.heatmap(corr, annot=True, cmap='coolwarm')

# Add title
plt.title('Correlation Heatmap of Titanic Dataset', fontsize=16)
plt.show()
```




```
corr = dataset.corr(numeric_only=True)

# Cluster Map
sns.clustermap(corr, annot=True, cmap='viridis')
plt.show()
```


1.0
0.5
0.0
−0.5
1 0.41 -0.035 0.16 0.083 -0.31 -0.25 -0.58
0.41 1 0.082 0.22 0.018 -0.19 -0.35 -0.58
-0.035 0.082 1 0.26 -0.34 -0.077 -0.56 -0.2
0.16 0.22 0.26 1 -0.55 0.096 -0.18 -0.27
0.083 0.018 -0.34 -0.55 1 -0.37 0.094 0.14
-0.31 -0.19 -0.077 0.096 -0.37 1 0.28 0.2
-0.25 -0.35 -0.56 -0.18 0.094 0.28 1 0.4
-0.58 -0.58 -0.2 -0.27 0.14 0.2 0.4 1
sibsp
parch
survived
fare
pclass
age
adult_male
alone