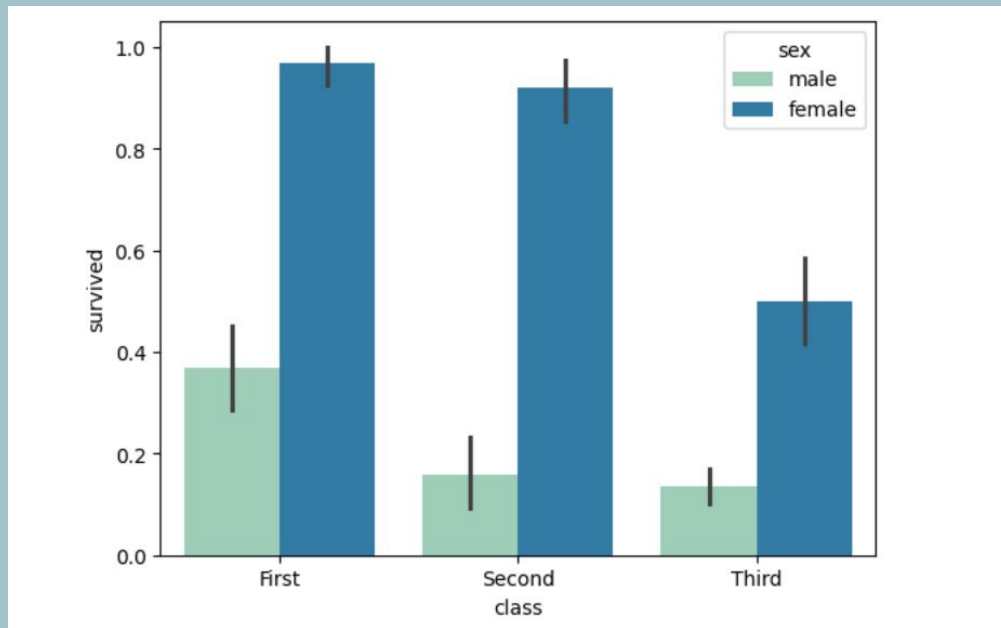


Titanic Passenger Data

Plots made with Seaborn

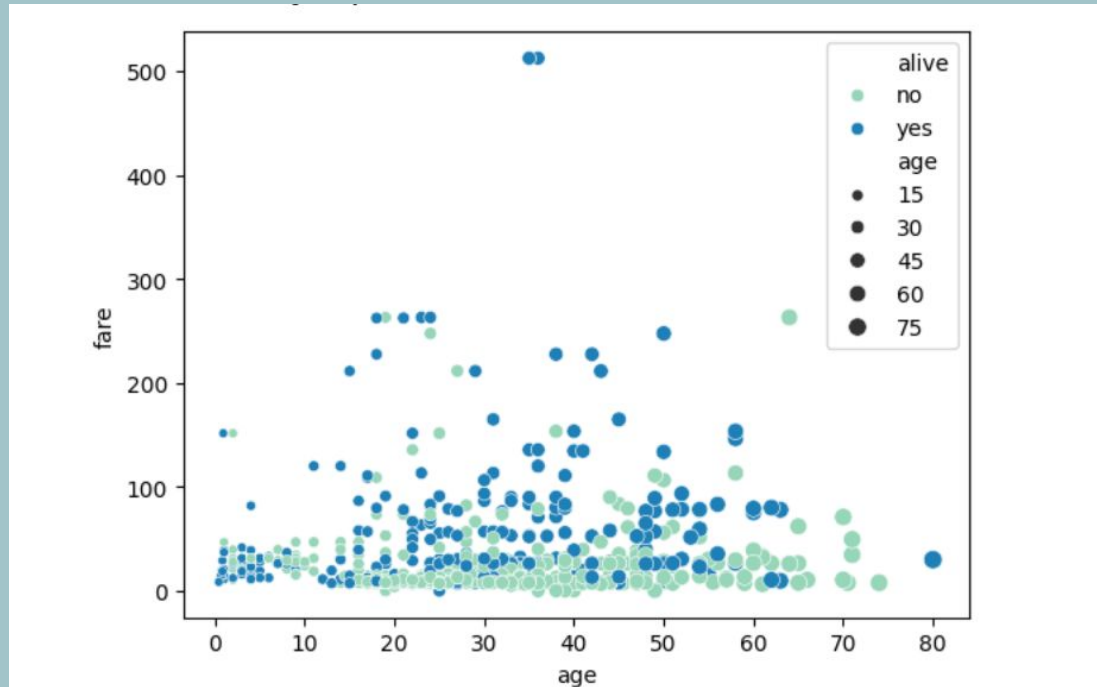
```
sns.barplot(titanic_data, x='class', y='survived', hue='sex', palette='YlGnBu')
```

a bar plot comparing passenger classes and sex with survival rate. it shows that if you were female and travelling in second or first class, your chances of survival were greater.



```
sns.scatterplot(titanic_data, x='age', y='fare', hue='alive', palette='YlGnBu', size='age')
```

a scatterplot comparing age, fare paid and survival. it shows a higher density of surviving passengers in groups that paid a higher fare, and who were under 55 years of age.



Making a dataframe showing surviving passengers.

```
[36]: alive_pass = titanic_data[titanic_data['survived'] == 1]
```

```
alive_pass
```

```
[36]:
```

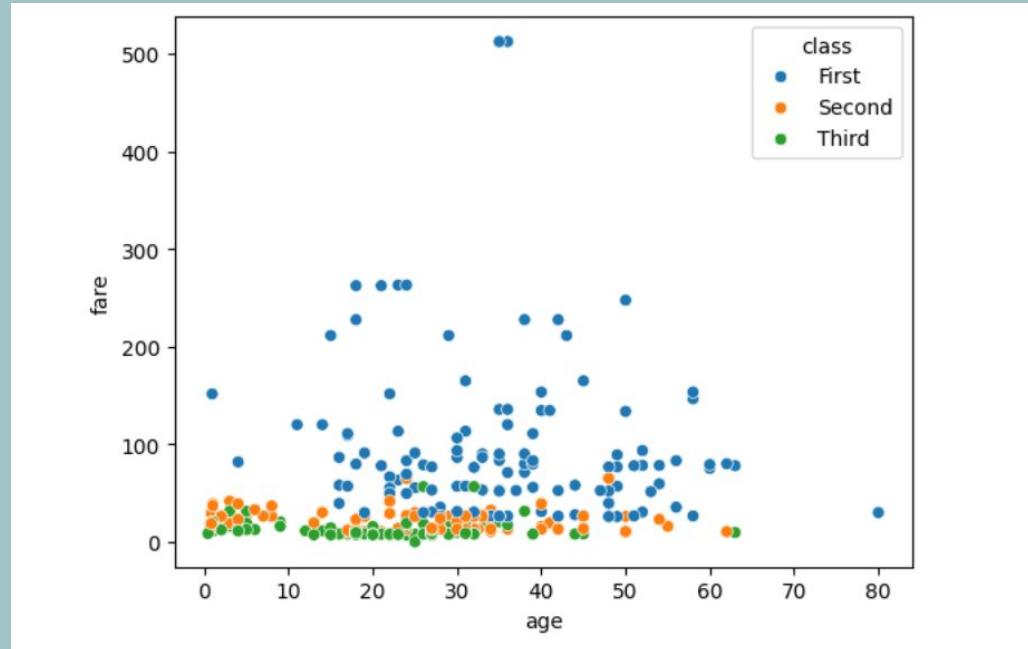
	survived	pclass	sex	age	sibsp	parch	fare	embarked	class	who	adult_male	deck	embark_town	alive	alone
1	1	1	female	38.0	1	0	71.2833	C	First	woman	False	C	Cherbourg	yes	False
2	1	3	female	26.0	0	0	7.9250	S	Third	woman	False	NaN	Southampton	yes	True
3	1	1	female	35.0	1	0	53.1000	S	First	woman	False	C	Southampton	yes	False
8	1	3	female	27.0	0	2	11.1333	S	Third	woman	False	NaN	Southampton	yes	False
9	1	2	female	14.0	1	0	30.0708	C	Second	child	False	NaN	Cherbourg	yes	False
...
875	1	3	female	15.0	0	0	7.2250	C	Third	child	False	NaN	Cherbourg	yes	True
879	1	1	female	56.0	0	1	83.1583	C	First	woman	False	C	Cherbourg	yes	False
880	1	2	female	25.0	0	1	26.0000	S	Second	woman	False	NaN	Southampton	yes	False
887	1	1	female	19.0	0	0	30.0000	S	First	woman	False	B	Southampton	yes	True
889	1	1	male	26.0	0	0	30.0000	C	First	man	True	C	Cherbourg	yes	True

342 rows × 15 columns

```
sns.scatterplot(alive_pass, x='age', y='fare', hue='class')
```

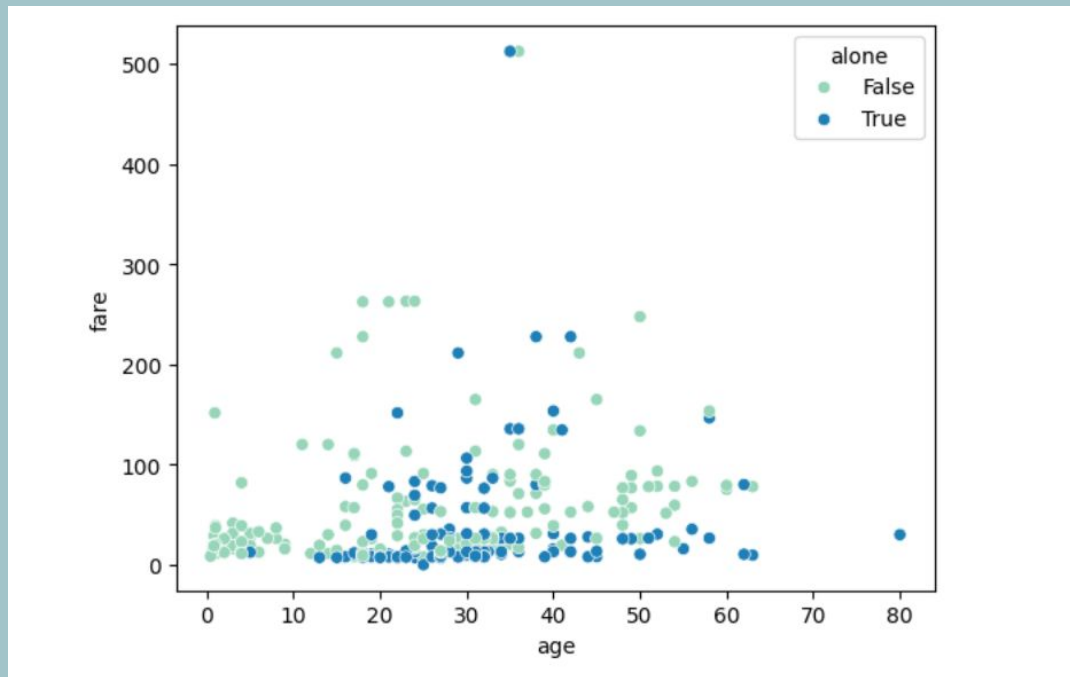
a scatterplot examining only the surviving passengers. it compares fare, age and class, and shows that in third class passengers paying a low fare, a much higher volume of survivors were under 40 years old. this is also true to some extent of second class passengers, though more older people from this class/fare category survived than the third class.

in first class, and people paying higher fares generally, the age range was much more varied.



```
sns.scatterplot(alive_pass, x='age', y='fare', hue='alone', palette='YlGnBu')
```

a scatterplot comparing age and fare of surviving passengers and showing whether they were alone or not. we see that very young passengers were rarely alone, which makes sense, but also that more younger adults paying lower fares were more often alone.



Making a dataframe showing only dead passengers.

```
[70]: dead_pass = titanic_data[titanic_data['survived'] == 0]
```

```
dead_pass
```

```
[70]:
```

	survived	pclass	sex	age	sibsp	parch	fare	embarked	class	who	adult_male	deck	embark_town	alive	alone
0	0	3	male	22.0	1	0	7.2500	S	Third	man	True	NaN	Southampton	no	False
4	0	3	male	35.0	0	0	8.0500	S	Third	man	True	NaN	Southampton	no	True
5	0	3	male	NaN	0	0	8.4583	Q	Third	man	True	NaN	Queenstown	no	True
6	0	1	male	54.0	0	0	51.8625	S	First	man	True	E	Southampton	no	True
7	0	3	male	2.0	3	1	21.0750	S	Third	child	False	NaN	Southampton	no	False
...
884	0	3	male	25.0	0	0	7.0500	S	Third	man	True	NaN	Southampton	no	True
885	0	3	female	39.0	0	5	29.1250	Q	Third	woman	False	NaN	Queenstown	no	False
886	0	2	male	27.0	0	0	13.0000	S	Second	man	True	NaN	Southampton	no	True
888	0	3	female	NaN	1	2	23.4500	S	Third	woman	False	NaN	Southampton	no	False
890	0	3	male	32.0	0	0	7.7500	Q	Third	man	True	NaN	Queenstown	no	True

549 rows × 15 columns

```
sns.boxplot(dead_pass, x='who', y='age', hue='embark_town')
```

a bar plot showing dead passengers' ages, demographic and embark town. it shows that the children who embarked in cherbourg and died were older than those from southampton and queenstown, though more children who died were from southampton.

it also shows that of the dead passengers, most of the women were from cherbourg, and most of the men were from queenstown.

