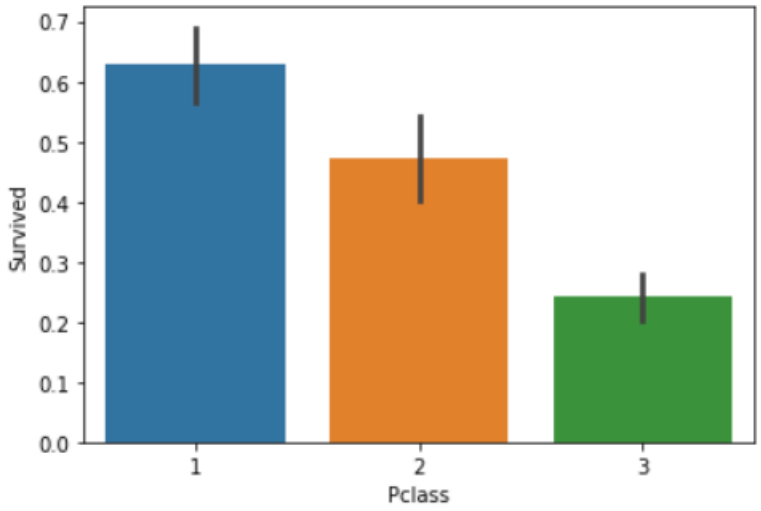
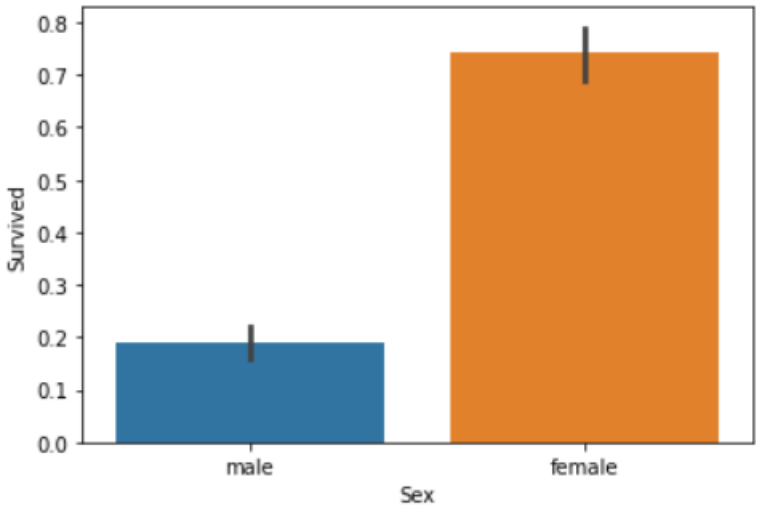
Titanic Dataset Analysis

Determine if the survival rate is associated to the class of passenger



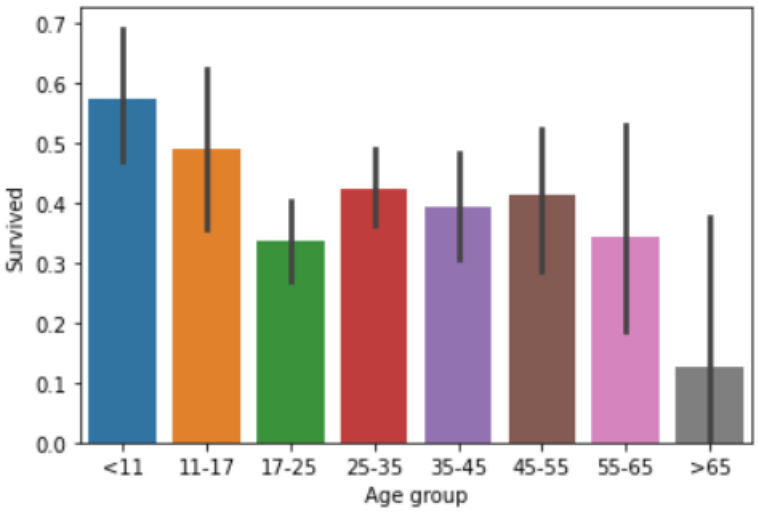
We can see the Class-Survival Rate graph above. And the graph shows us that higher the class, higher the survival rate. The highest survival rate belongs to the first clast and then the survival rate starts declining in every lower class. Therefore, this graph gives us strong evidence for the claim that the class of the passengers is associated to the survival rate. And the higher class had a higher chance of surviving.

Determine if the survival rate is associated to the gender



We can see the Gender-Survival Rate graph above. And the graph shows us that the females have significantly higher survival rate than the males. This graph gives us strong evidence for the claim that the gender of the passengers is associated to the survival rate. And the females have a higher chance of surviving.

Determine the survival rate is associated to the age



We can see the Age-Survival Rate graph above. And the graph shows us that the higher survival rate belongs to youngest age groups (0 to 17). While the teenagers (17-25) have a low surviving rate, the elders (+65) have the lowest surviving rate. After the age 55, we can see that the survival chance gradually keeps declining. We can also check the correlation coefficient between these two variables to make a judgement.

```
titanic[['Age','Survived']].corr()
```

	Age	Survived
Age	1.000000	-0.077221
Survived	-0.077221	1.000000

As the correlation coefficient shows a negative number that is really close to 0, it does not give any evidence for the correlation between our 2 variables.

All these being considered, we conclude that we do not have enough evidence to claim that there is an association between the age of the passengers and the survival rate.