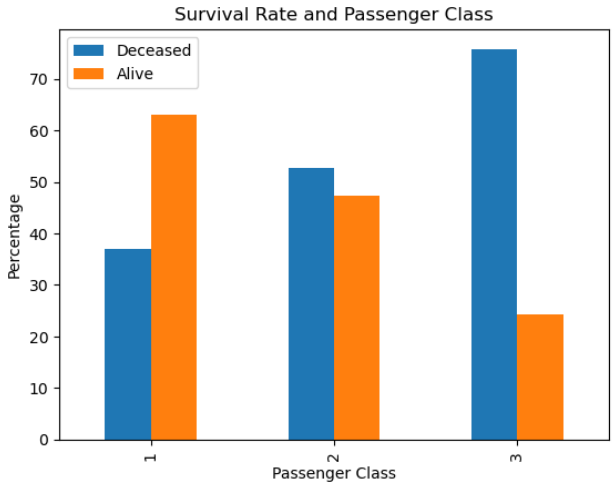
EXECUTIVE SUMMARY – TITANIC STUDY

The sinking of the Titanic is one of the most famous maritime disasters. The supposedly unsinkable Titanic succumbed to the sea after striking an iceberg on its inaugural journey. Survival during this calamity appeared to involve an element of chance, but certain demographics demonstrated higher likelihoods of making it through the disaster than others. In this study, we will see which demographics have an association with the passenger's survival rate.



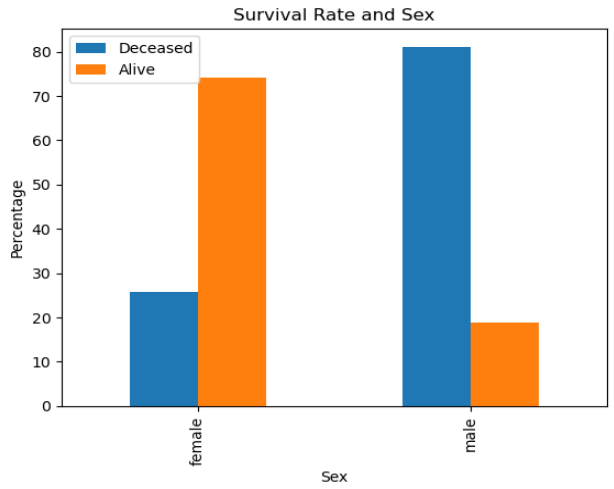
Survival Rate and Passenger Class

The group of bars are different signifying a relationship between the survival rate and passenger class. To check this, we conducted a chi-square analysis.

- H0 - Survival rate and passenger class are independent.
- Ha - Survival rate and passenger class are not independent (the two variables are related).

Result: Chi-square statistic > P-value so we reject our H0.

Conclusion: We reject our hypothesis and conclude that passenger's survival rate is related to the passenger class. Data shows that the higher the passenger class, the higher the survival rate.



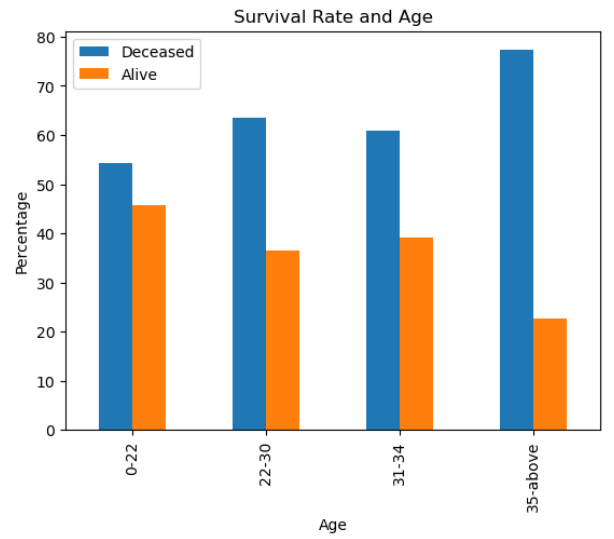
Survival Rate and Passenger Sex

The group of bars are different signifying a relationship between the survival rate and sex. To check this, we conducted a chi-square analysis.

- H0 - Survival rate and sex are independent.
- Ha - Survival rate and sex are not independent (the two variables are related).

Result: Chi-square statistic > P-value so we reject our H0.

Conclusion: We reject our hypothesis and conclude that passenger's survival rate is related to passenger sex. Data shows that female passengers have higher rate of survival than male.



Survival Rate and Passenger Age

The group of bars are similar signifying independence between the survival rate and age. To check this, we conducted a chi-square analysis.

H0 - Survival rate and age are independent.
Ha - Survival rate and age are not independent (the two variables are related).

Result: With a p-value of 0.0617, it is larger than the default significance level of 0.05so we accept our H0.

Conclusion: We accept our hypothesis that passenger's survival rate is not related to their age.