

Titanic Insights

The sinking of the RMS Titanic on April 15, 1912 is one of the most famous maritime disasters in history. The ship, which was on its maiden voyage from Southampton to New York City, struck an iceberg and sank in the North Atlantic Ocean, killing over 1,500 people. We worked on the Titanic dataset from kaggle and found the following insights: -

- **Note:** - Insights divided by each feature.

* Survived: -

- Most passengers didn't survive.

* Embarked: -

- Cherbourg (C) port had the highest survival rate. Although most passengers boarded from Southampton (S), it had the lowest survival rate.
- Q embarking did not have anyone in first and second class.
- Females in all ports had the highest survival rate.
- Males from Q port had the lowest survival rate, with only 7% surviving.
- Most females in first and second class who embarked from S and C survived.
- All females in first and second class who embarked from Q survived.
- Males in all classes and from all ports had the lowest survival rate.
- All males in first and second class who embarked from Q did not survive.
- S port had the largest passenger count, but the lowest survival rate.
- More than 50% of passengers who embarked from C port survived.

* Sex: -

- Most passengers were males and were in the third class.
- 19% of male passengers did not survive, while 75% of female passengers survived.
- Almost all females in the first and second classes survived, while 50% of females in the third class survived.
- Males in the second and third classes have the lowest survival rate.
- most males in the second class didn't survive.
- Only the first class has a higher number of male survivors than male non-survivors.
- Most males who did not have any siblings or parents on board did not survive.
- All males who had more than three siblings or parents on board did not survive.
- Females have a higher chance of survival if they have zero, one, or two siblings or parents on board than if they have three or more. The same is true for parents and children.
- There is a negative correlation between survival and number of siblings or parents on board for males, but a positive correlation for females.
- There is a negative correlation between survival and number of parents and children on board for males, but a positive correlation for females.
- 75% of females survived, regardless of whether they were traveling with a group or not.
- Nearly all females in the first and second classes survived. Only 59% of alone female passengers in the third class survived compared to 40% of females who were with friends or families.

* Pclass: -

- Most passengers were in third class.
- Passengers in first class had the highest survival rate, while passengers in third class had the lowest survival rate.
- More than 75% of passengers in third class did not survive.
- 63% of passengers in first class survived.
- All passengers who had free tickets or large discounts in first or second class did not survive.

× **with group: -**

- Most passengers were not with groups.
- 52% of passengers with friends or family survived.
- First class passengers had the highest survival rate, regardless of whether they were alone or with friends or family.

× **is alone: -**

- Nearly half of passengers were alone, most of them in third class and male. However, only 27% of them survived.

× **SiibSp: -**

- Most passengers didn't have Siblings or parents, and were male.
- Passengers with more than 3 Siblings or spouse were only in the third class.
- Passengers with more than 4 Parents or children were only in the third class.
- There is a positive correlation between fare and Siblings or spouse up to 3 Siblings or spouse.
- There is a positive correlation between fare and Parents or children up to 4 Parents or children.
- Passengers with 1 or 2 Siblings or spouse had the highest survival rate. No one with more than 4 Siblings or spouse survived.
- Females in clusters from 0 to 4 Siblings or spouse had the highest survival rate.
- Most passengers in first class had 3 Siblings or spouse.
- Most passengers in first class had 4 Parents or children.
- The test set has up to 9 Parents or children, but the train set has only 6 Parents or children.

× **Title: -**

- Females had a higher survival rate than males, regardless of class.
- Passengers in first and second class had a higher survival rate than those in third class, regardless of gender.
- The highest survival rate was among females in first class, at 80%.
- The lowest survival rate was among males in third class, at 16%.
- All first and second class Master passengers survived.
- Only 50% of third class Mrs. and Miss passengers survived.
- Only 35% of first class Mr. passengers survived.

× **Fare: -**

there was a positive correlation between fare and survival rate. Passengers in first class had the highest fares and the highest survival rate, while passengers in third class had the lowest fares and the lowest survival rate.

Females also had higher average fares and higher survival rates than males in all passenger class groups.

× **FareBin: -**

- Survival rates were lower for men than for women, regardless of age or class.
- Survival rates were higher for people in first and second class than for those in third class.
- Children had higher survival rates than adults.
- The highest survival rate was among females in first class, at 80%.
- The lowest survival rate was among males in third class, at 16%.
- Males in all classes and from all ports had the lowest survival rate.

- **survival rates for different age and class groups:**

- Infants: 67% (males: 72%, females: 58%)
 - Children: 51% (females: 59%, males: 43%)
 - Teens: 43% (females: 75%, males: 8%)
 - Middle adulthood: 40% (females: 79%, males: 19%)
 - Emerging adulthood: 38% (females: 70%, males: 12%)
 - Young adulthood: 34% (females: 80%, males: 17%)
 - Elderly: 9% (males only).
-