##### LINK - https://www.kaggle.com/c/titanic/data #####

# **Problem Statement:** (Open Source)

The sinking of the RMS Titanic is one of the most infamous shipwrecks in history. On April 15, 1912, during her maiden voyage, the Titanic sank after colliding with an iceberg, killing 1502 out of 2224 passengers and crew. This sensational tragedy shocked the international community and led to better safety regulations for ships.

One of the reasons that the shipwreck led to such loss of life was that there were not enough lifeboats for the passengers and crew. Although there was some element of luck involved in surviving the sinking, some groups of people were more likely to survive than others, such as women, children, and the upper-class.

In this challenge, we ask you to complete the analysis of what sorts of people were likely to survive. In particular, we ask you to apply the tools of machine learning to predict which passengers survived the tragedy.

We also include gender\_submission.csv, a set of predictions that assume all and only female passengers survive, as an example of what a submission file should look like.

### **Data Dictionary**

Variable	Definition	Key
survival	Survival	0 = No, 1 = Yes
pclass	Ticket class	1 = 1st, 2 = 2nd, 3 = 3rd
sex	Sex	
Age	Age in years	
sibsp	# of siblings / spouses aboard the Titanic	
parch	# of parents / children aboard the Titanic	
ticket	Ticket number	
fare	Passenger fare	
cabin	Cabin number	
embarked	Port of Embarkation	C = Cherbourg, Q = Queenstown, S = Southampton

### **Variable Notes**

pclass: A proxy for socio-economic status (SES)

1st = Upper 2nd = Middle 3rd = Lower

age: Age is fractional if less than 1. If the age is estimated, is it in the form of xx.5

sibsp: The dataset defines family relations in this way...

Sibling = brother, sister, stepbrother, stepsister

Spouse = husband, wife (mistresses and fiancés were ignored)

parch: The dataset defines family relations in this way...

Parent = mother, father

Child = daughter, son, stepdaughter, stepson

Some children travelled only with a nanny, therefore parch=0 for them.

## Goal

It is your job to predict if a passenger survived the sinking of the Titanic or not.

For each PassengerId in the test set, you must predict a 0 or 1 value for the Survived variable.

### Metric

Your score is the percentage of passengers you correctly predict. This is known simply as "accuracy".

### **Submission File Format**

You should submit a csv file with exactly 418 entries plus a header row. Your submission will show an error if you have extra columns (beyond Passengerld and Survived) or rows.