Goal

It is your job to predict if a passenger survived the sinking of the Titanic or not.  
For each in the test set, you must predict a 0 or 1 value for the variable.

Metric

Your score is the percentage of passengers you correctly predict. This is known as [accuracy](https://en.wikipedia.org/wiki/Accuracy_and_precision#In_binary_classification).

### Overview

The data has been split into two groups:

* training set (train.csv)
* test set (test.csv)

**The training set**should be used to build your machine learning models. For the training set, we provide the outcome (also known as the “ground truth”) for each passenger. Your model will be based on “features” like passengers’ gender and class. You can also use [feature engineering](https://triangleinequality.wordpress.com/2013/09/08/basic-feature-engineering-with-the-titanic-data/)to create new features.

**The test set**should be used to see how well your model performs on unseen data. For the test set, we do not provide the ground truth for each passenger. It is your job to predict these outcomes. For each passenger in the test set, use the model you trained to predict whether or not they survived the sinking of the Titanic.

### 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.

### Submission

**The final submission will consist of the following:**1. Jupyter Notebook file  
2. Test.csv file with survival predictions

3. Evaluation Metrics  
4. Clean code with comments and headings explaining all processes

**NOTE: Ensure all code is custom build no plagiarized code should be there.**