Proposal

Problem: we want to find out the connection between passengers' features and the probability of death. Based on this, we want to predict one passenger"s survival probability in a shipwreck.

Database:

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 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.

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

Network:

Decision tree, support vector machine(SVM) and Naive Bayes(NB). We will use standard form of the network.

Framework:

We will use decision tree to find out the most important features that affect a passenger's death in a shipwreck. Secondly, we will use SVM to find a decision boundary to classify and finally we use NB to predict death probability of a passenger with certain features

Reference material: Neural Network design, python machine learning and some information related to shipwreck from Internet

How to judge the performance of the network:
Test loss, training loss, ROC curve and confusion metrics

Provide a rough schedule for completing the project.

Step 1: Introduction about problem, topic and framework

Step 2: Description of the data set.

Step 3: Description of the machine learning network and training algorithm or other algorithms that you used.

Step 4： Experimental setup

Step 5 : Results

Step 6: conclusion and prediction