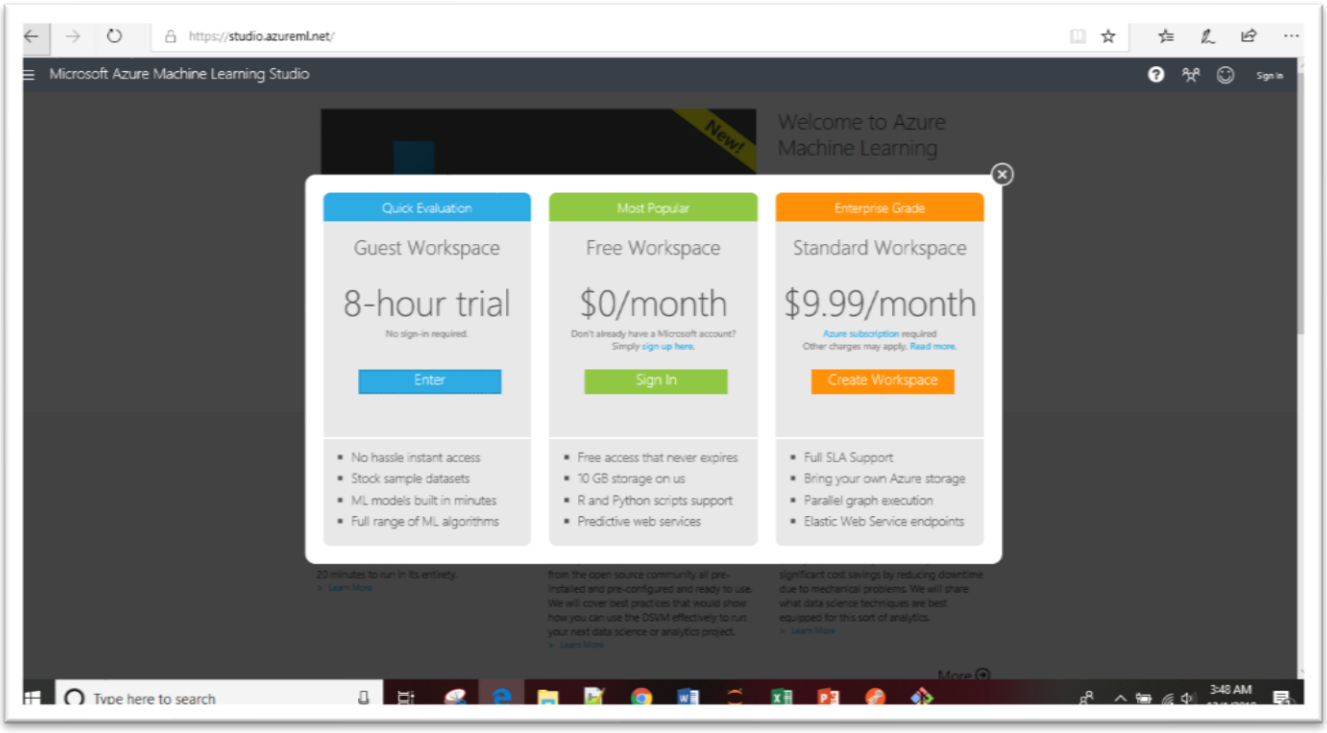
Azure Machine Learning Studio Demo

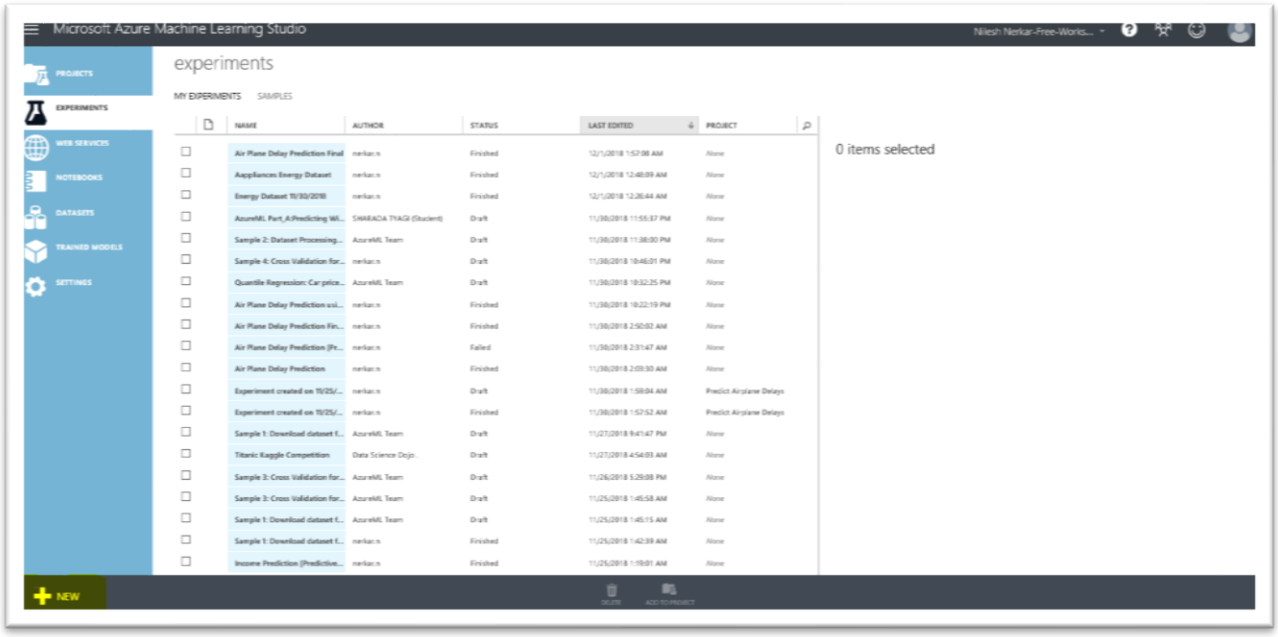
Quick Setup

For using ML Studio go to the url: https://studio.azureml.net

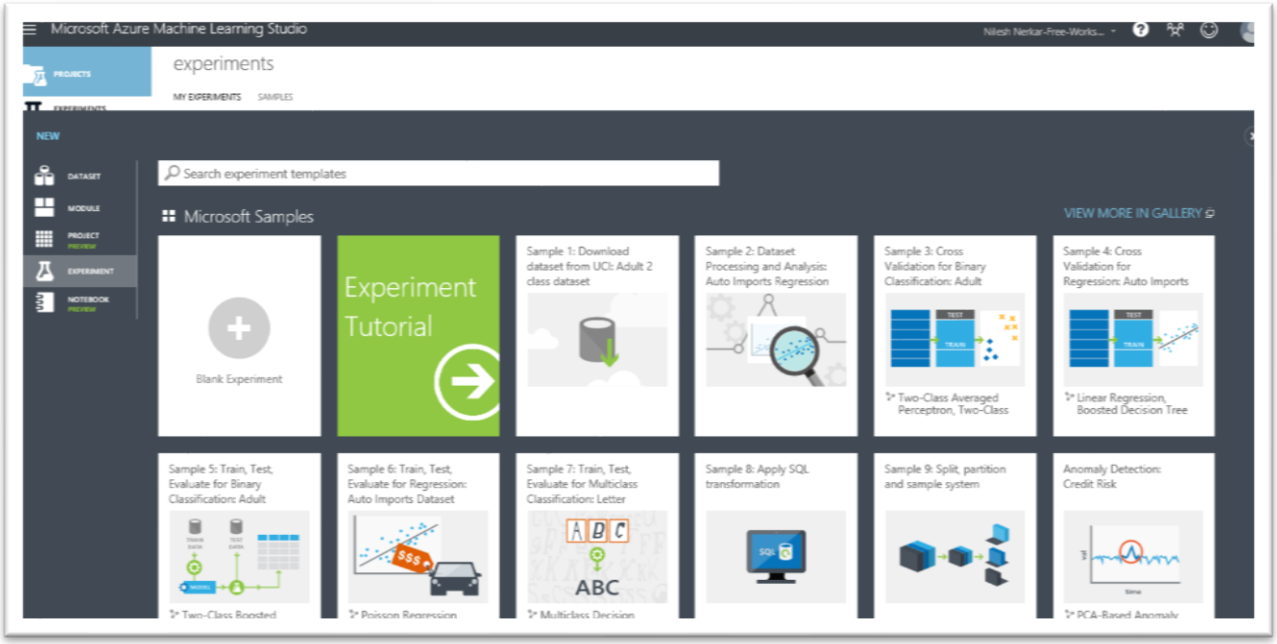
One can sign up with his or her Microsoft Account using any of the following available plan:



The following is the landing page of the studio:
A free workspace is been created for you if you select free plan, you can create an Experiment clicking on +NEW highlighted below.



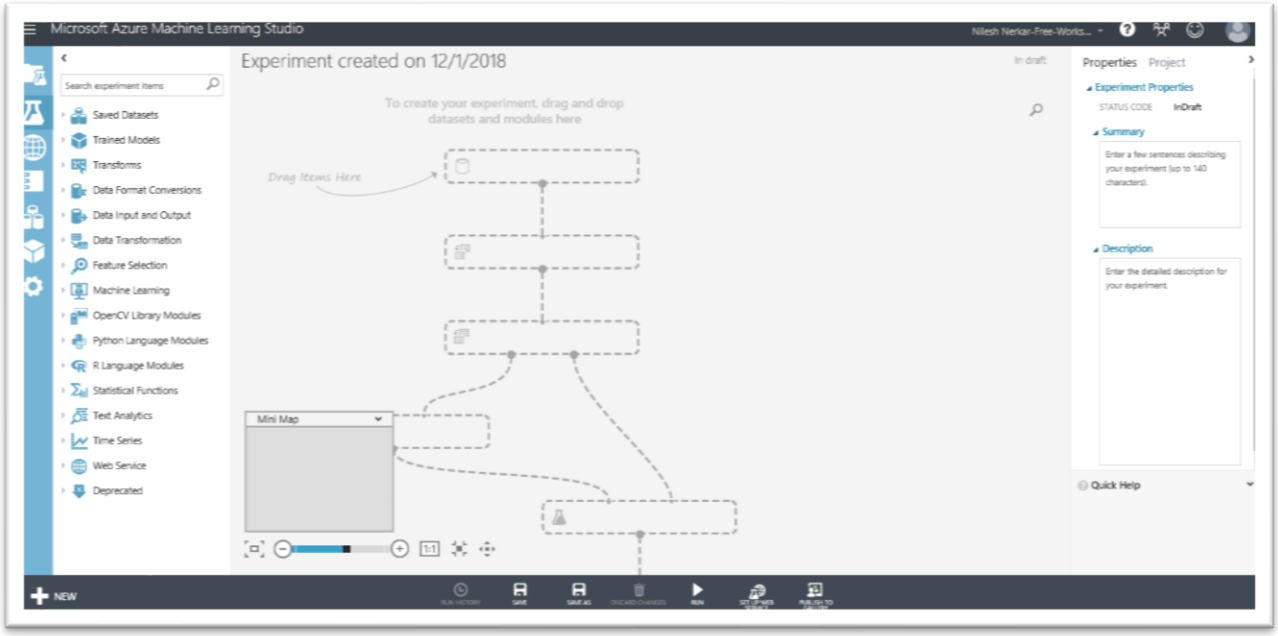
To start with, you can also open the basic tutorials present in the gallery as seen below or else create a new Blank Experiment:



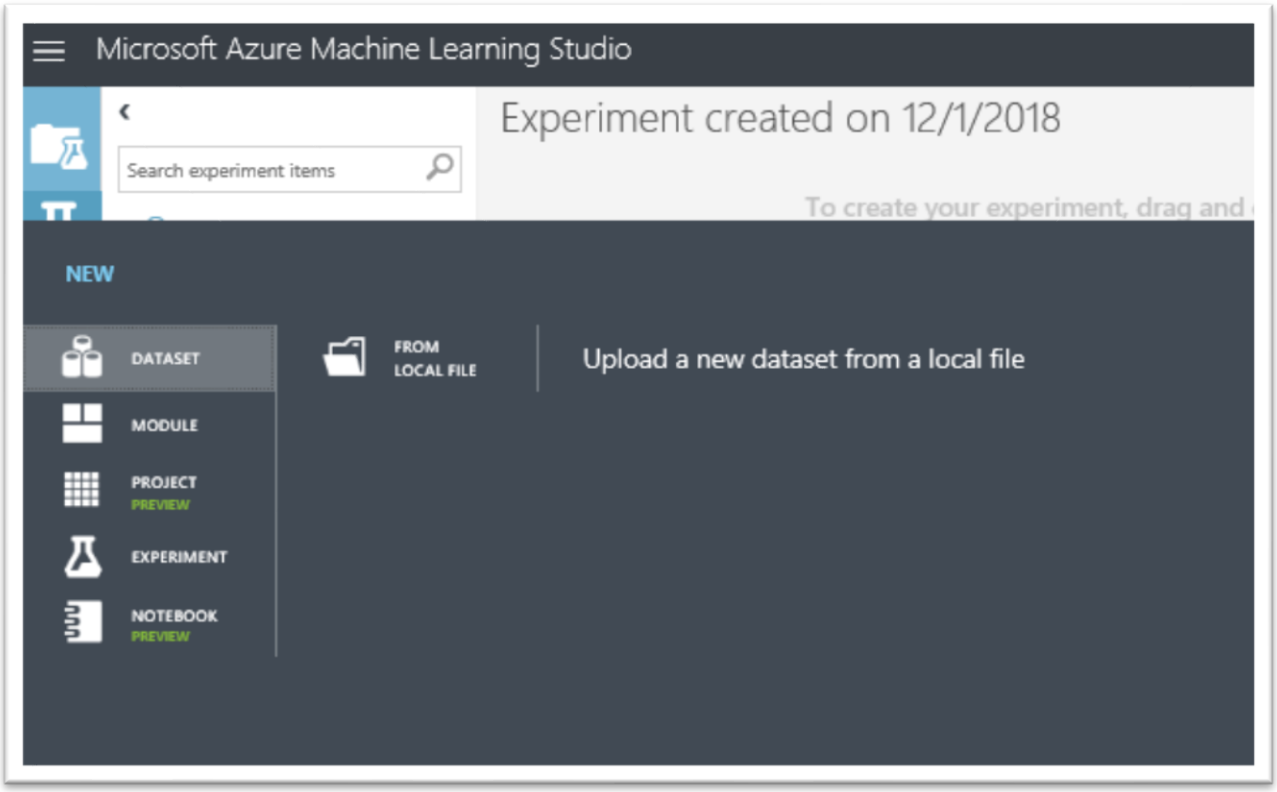
Let's Create a sample experiment for Titanic Survival Classification

You can download the data set from https://www.kaggle.com/azeembootwala/titanic

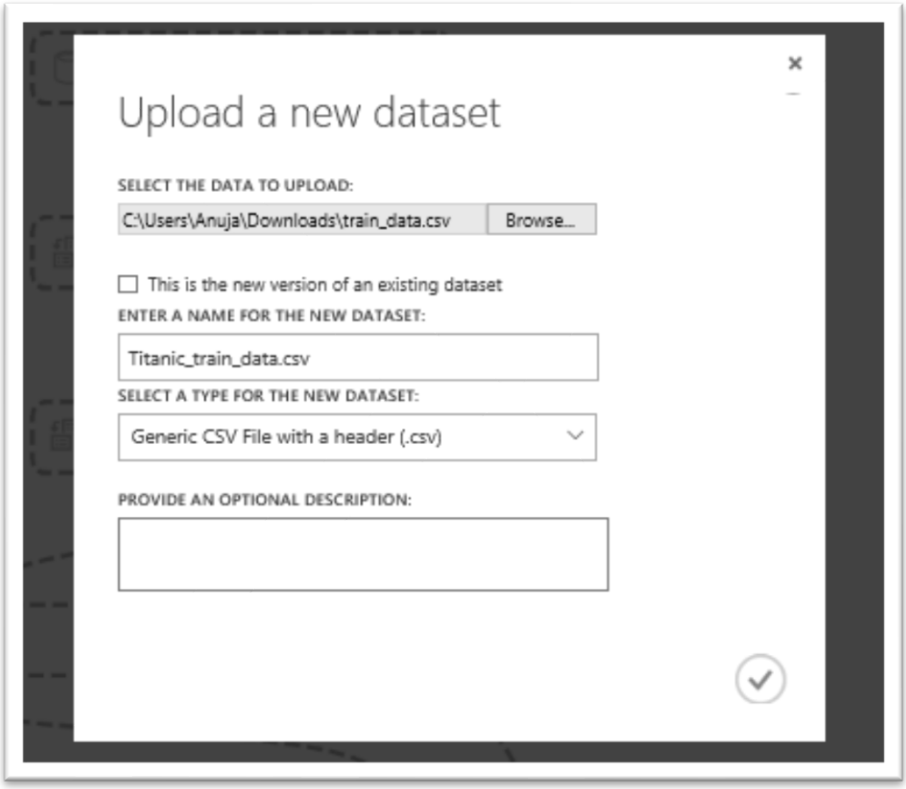
The following is the blank experiment page, were you can drag and drop modules from available ML Studio:



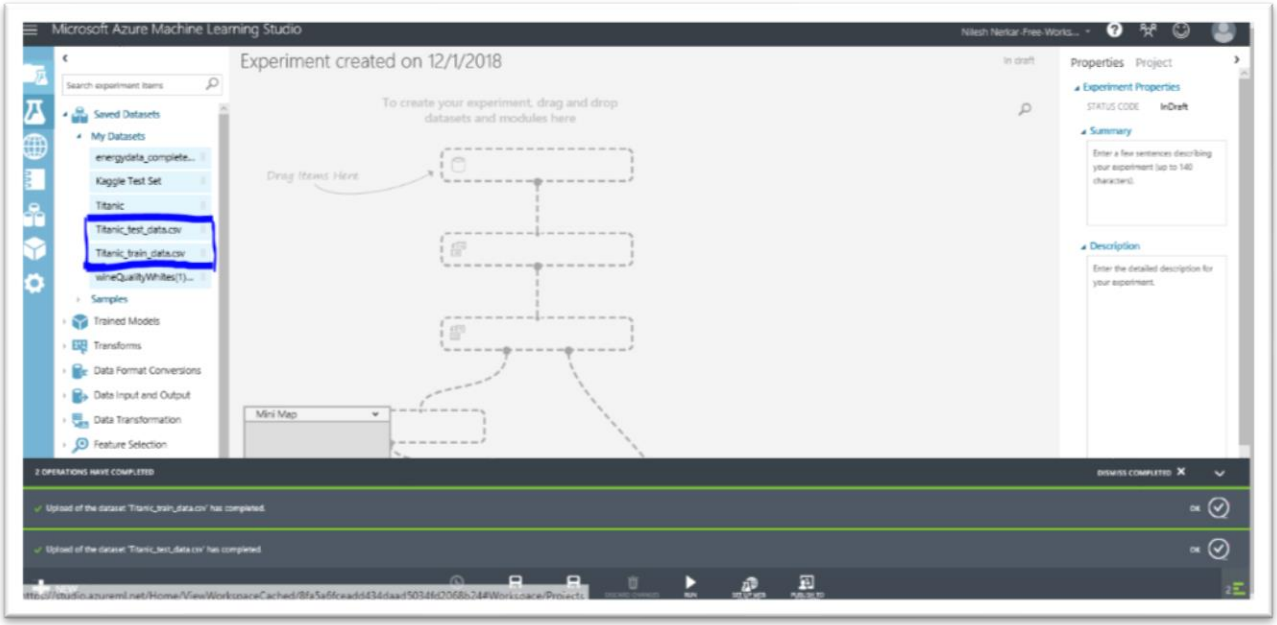
Data sets can be imported from using the following Dataset option available in the Studio:



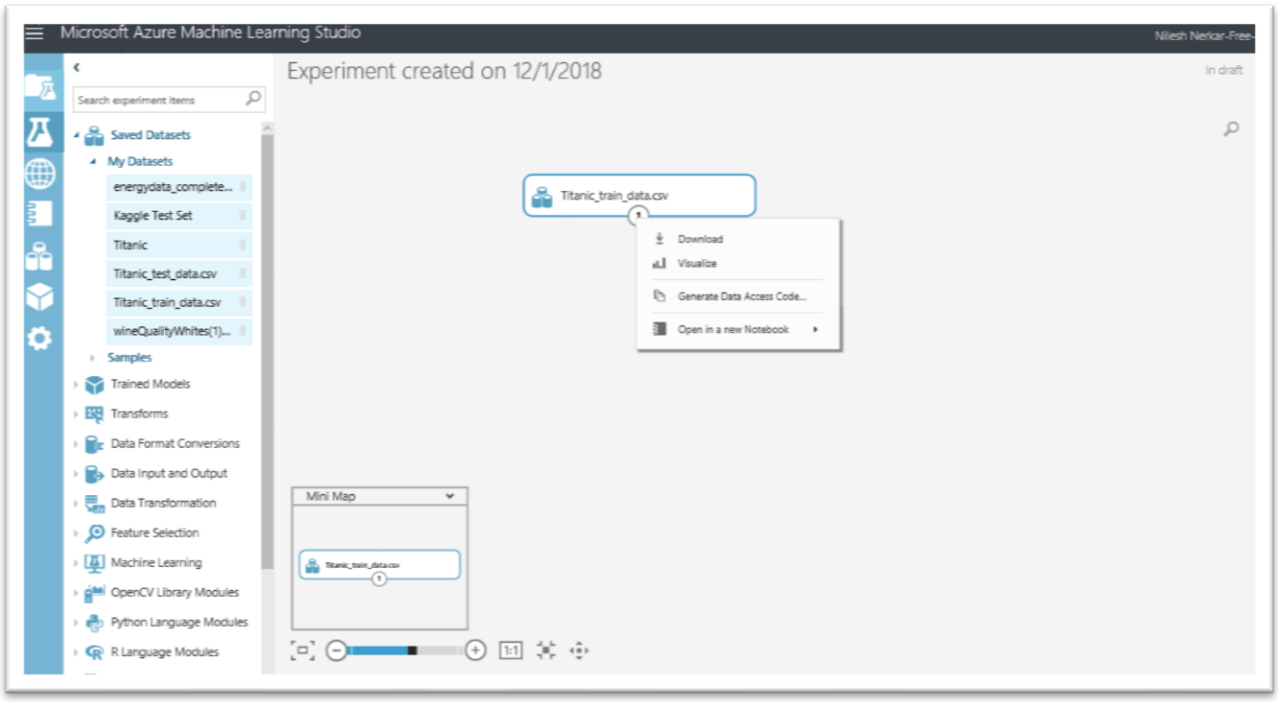
You can upload and rename the data set and also convert the type of the data set:



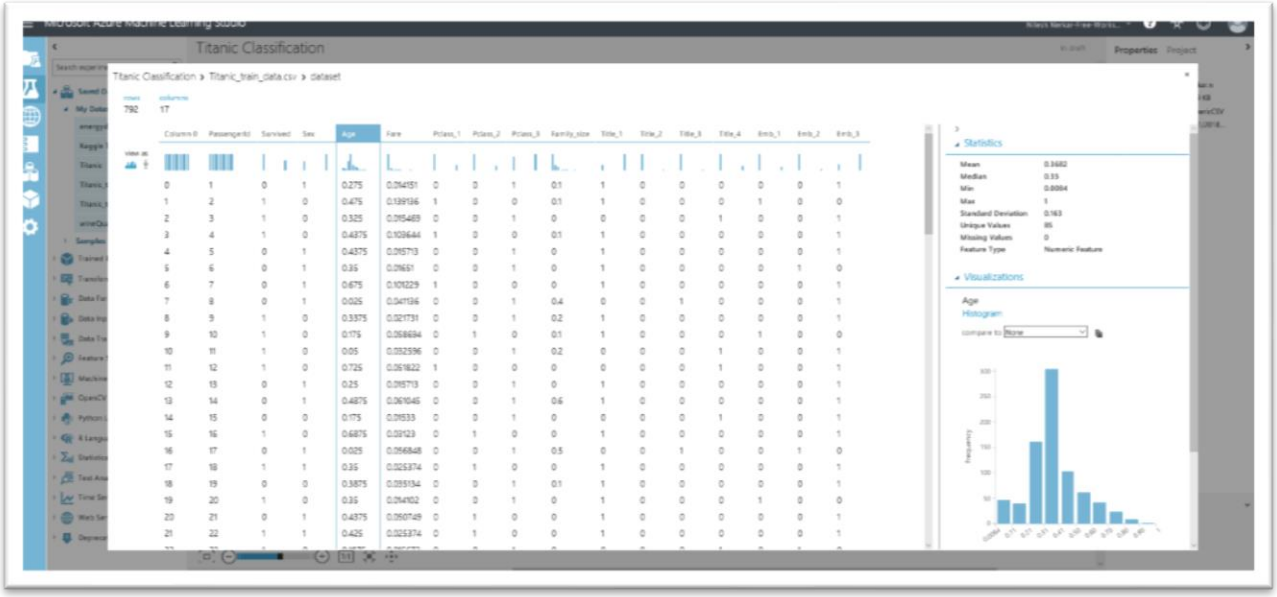
The imported data sets will be seen in the My Datasets under Saved Datasets:



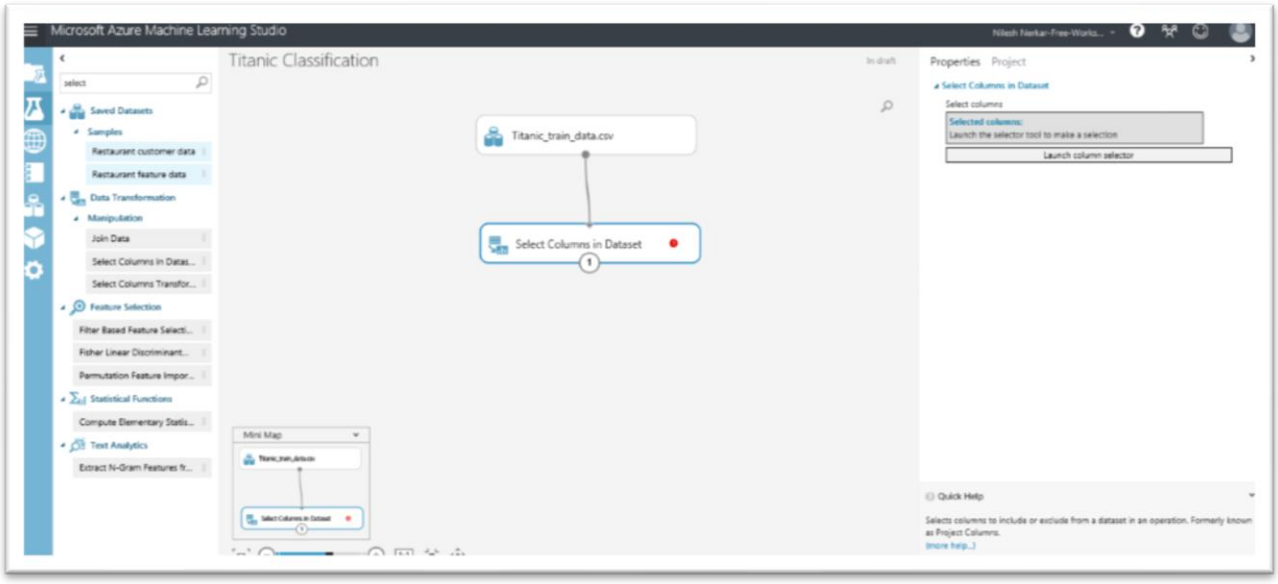
Drag the training dataset into the experiment page and you can visualize the features on one click:



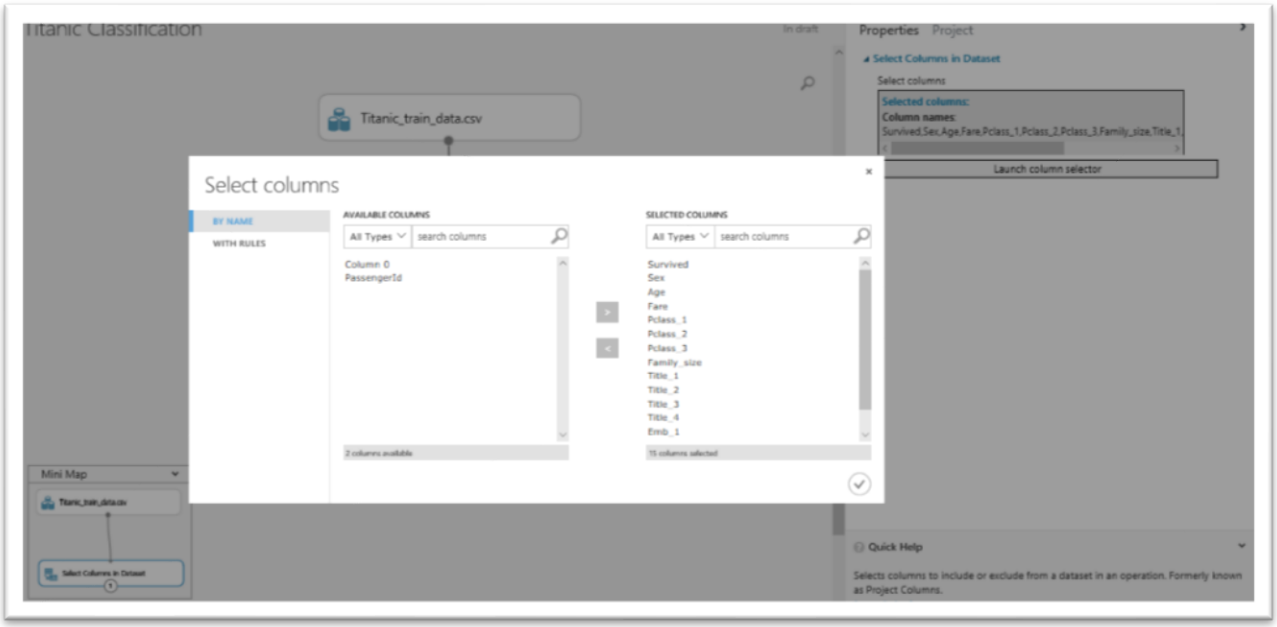
We can individually visualize the features and see the basic statisctics:



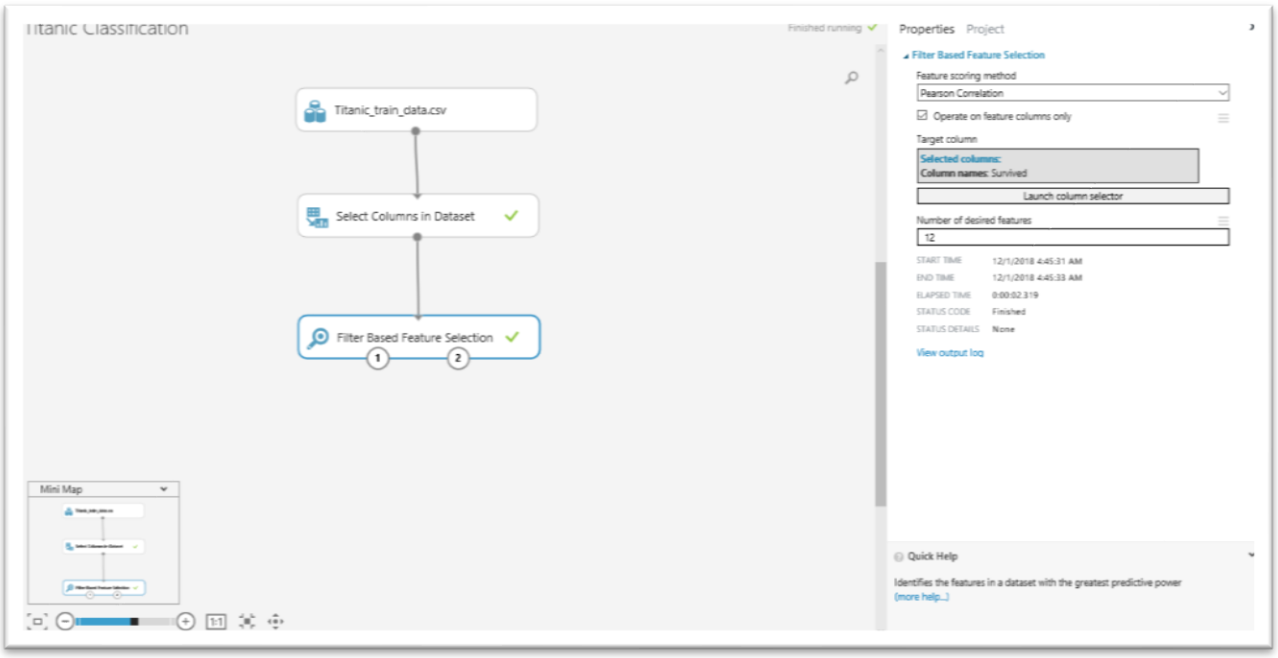
Deleting the unwanted columns using SELECT COLUMNS IN DATASET :
Click the launch column selector to select the columns



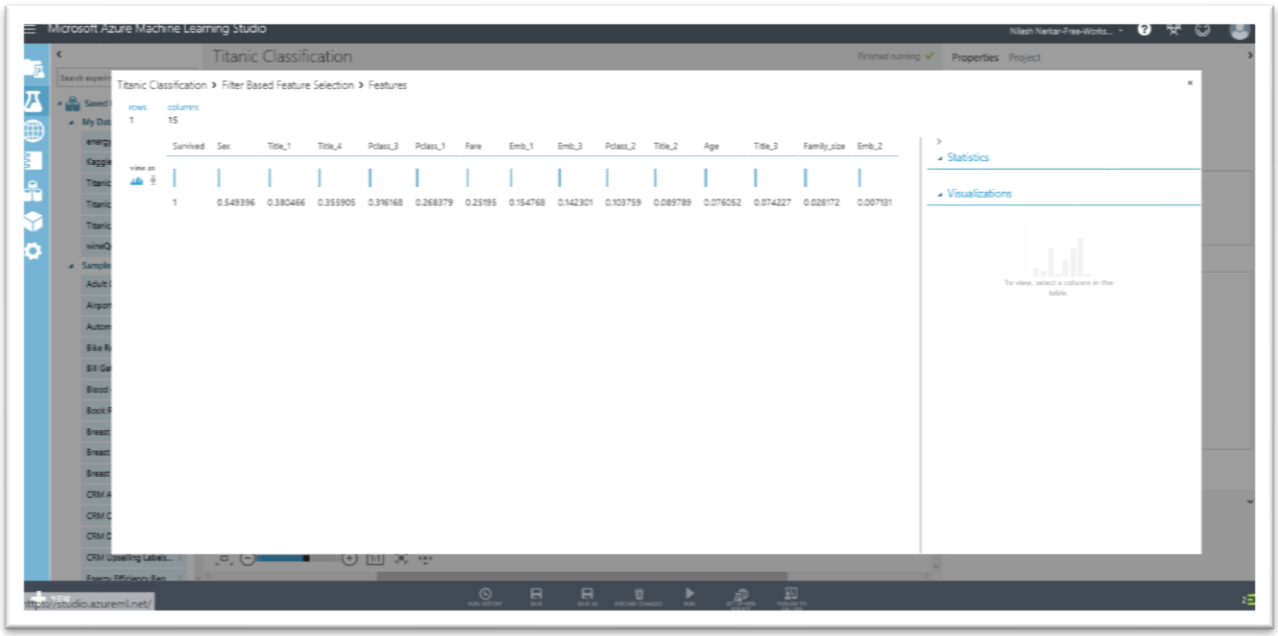
There are two types to select the columns by names and by rules, will go by the names:



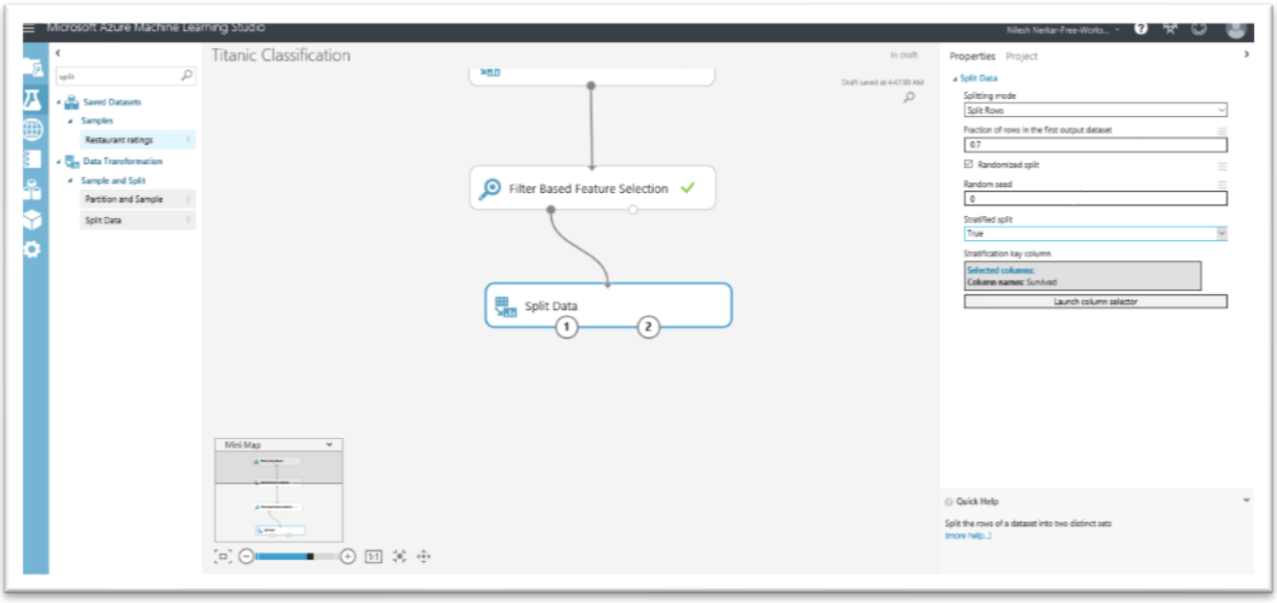
Feature selection can be done by dragging the Filter Feature Selection and choosing the feature method from the drop-down box on the right and also the number of features:



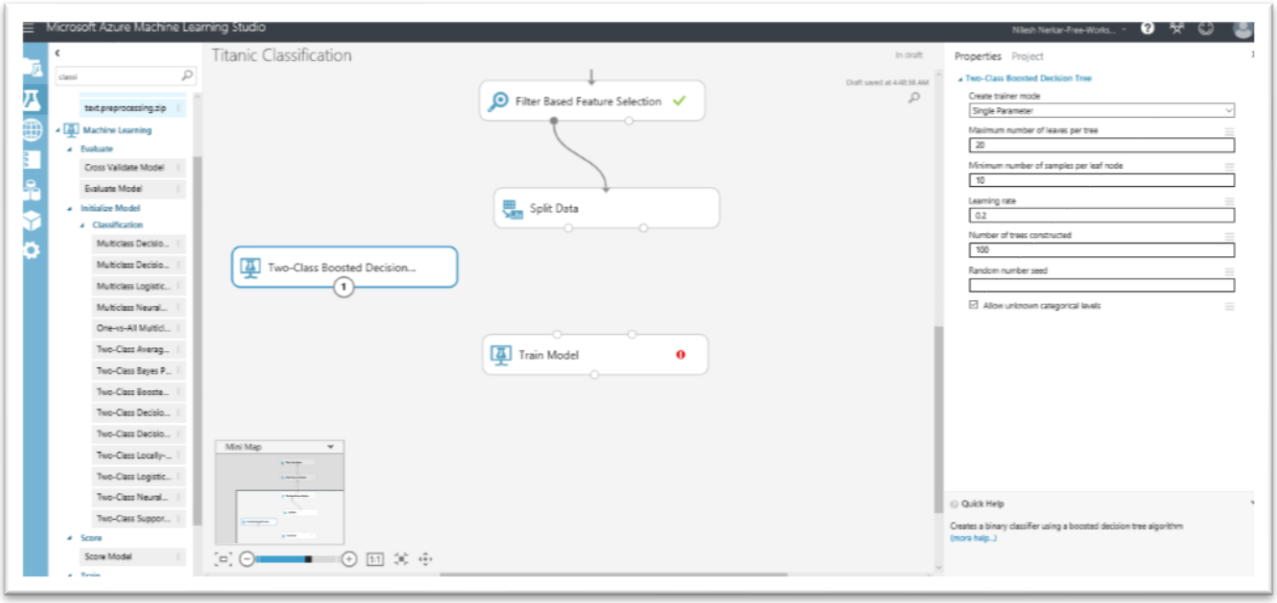
After running the module, we can visualize the scores for each column by clicking on the 2nd option of the Filter Based Feature Selection:



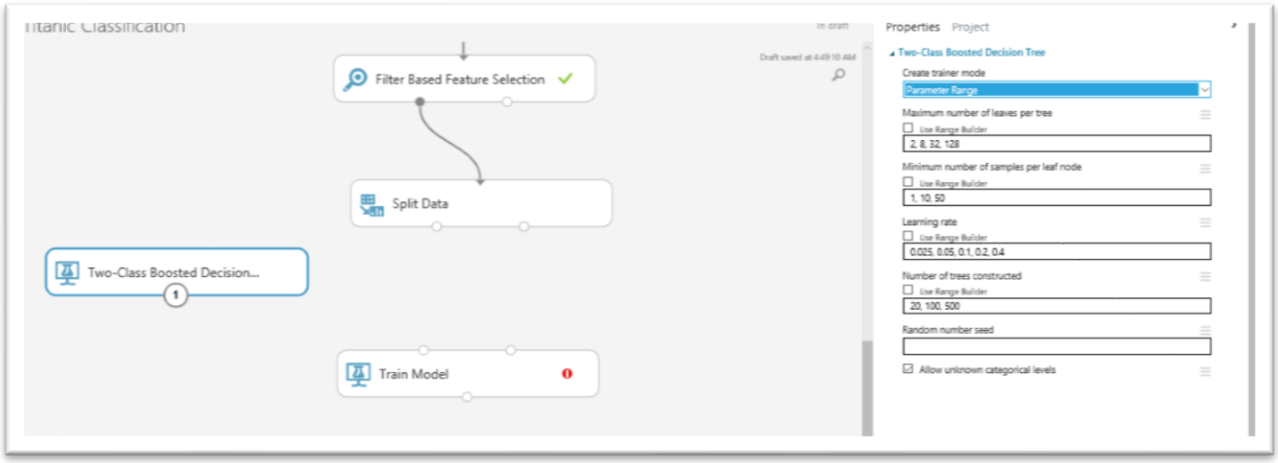
We can split the data into train and test using SLIT DATA also we can stratify the split based on our target:



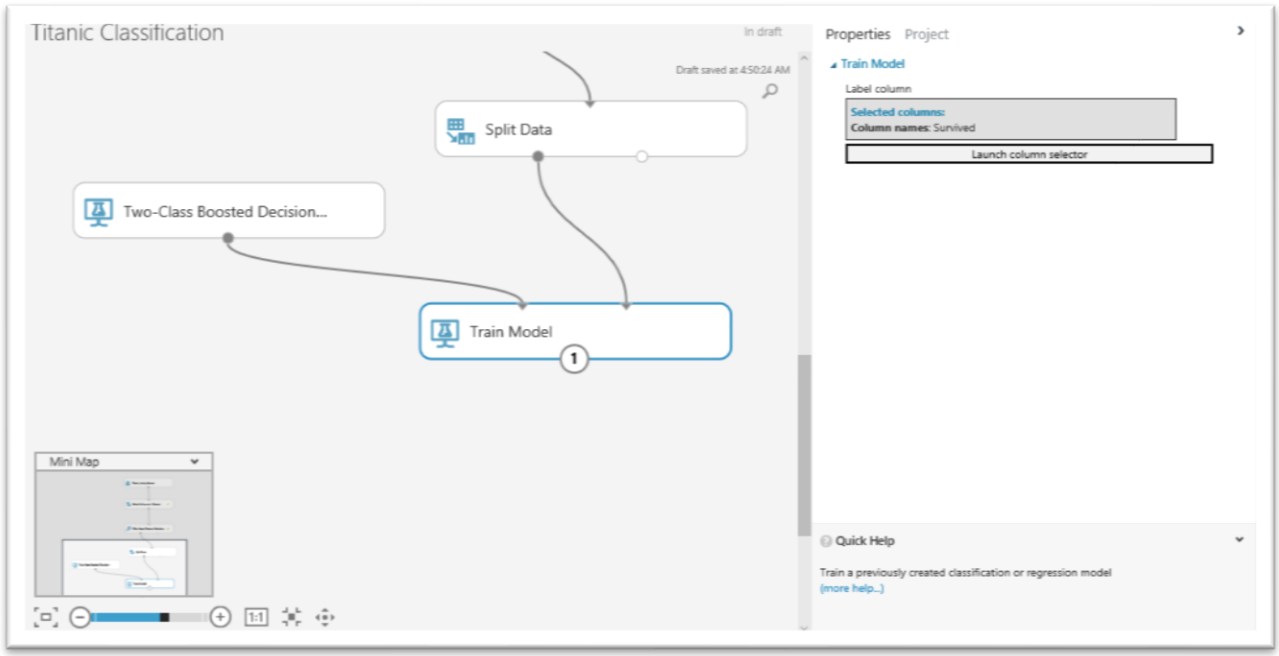
To train we need to use a model from available model, we use here GBM along with a train module:



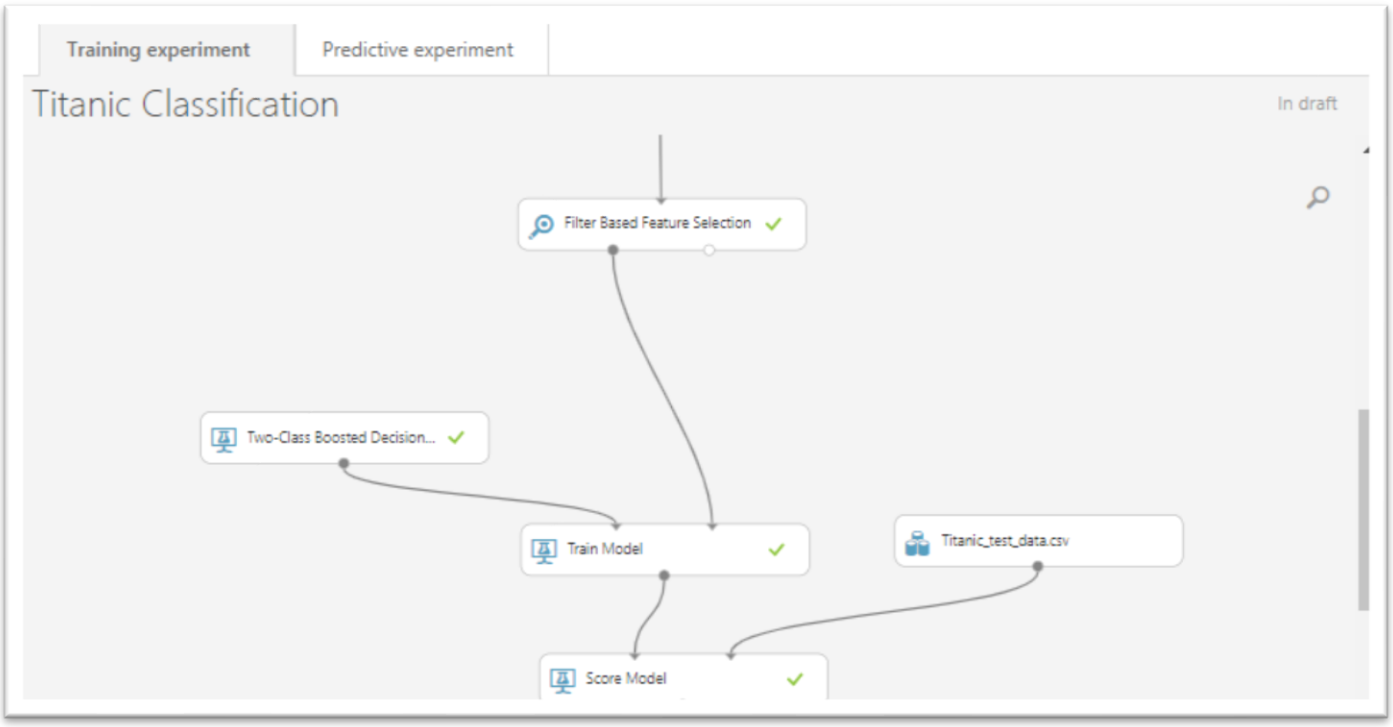
If you want to tune the parameters, we can set a parameter range for the model (highlighted)



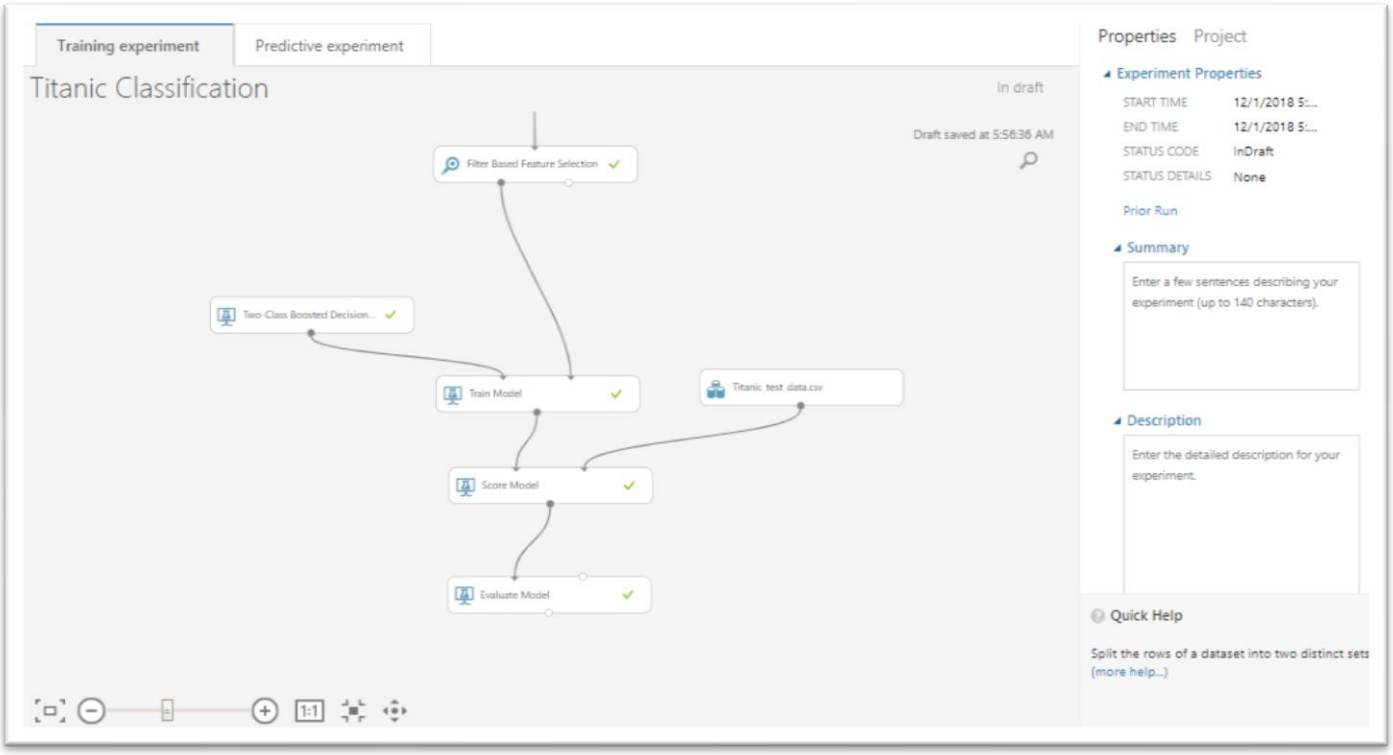
We need to specify the target variable to train the model, here we have selected “survived”:



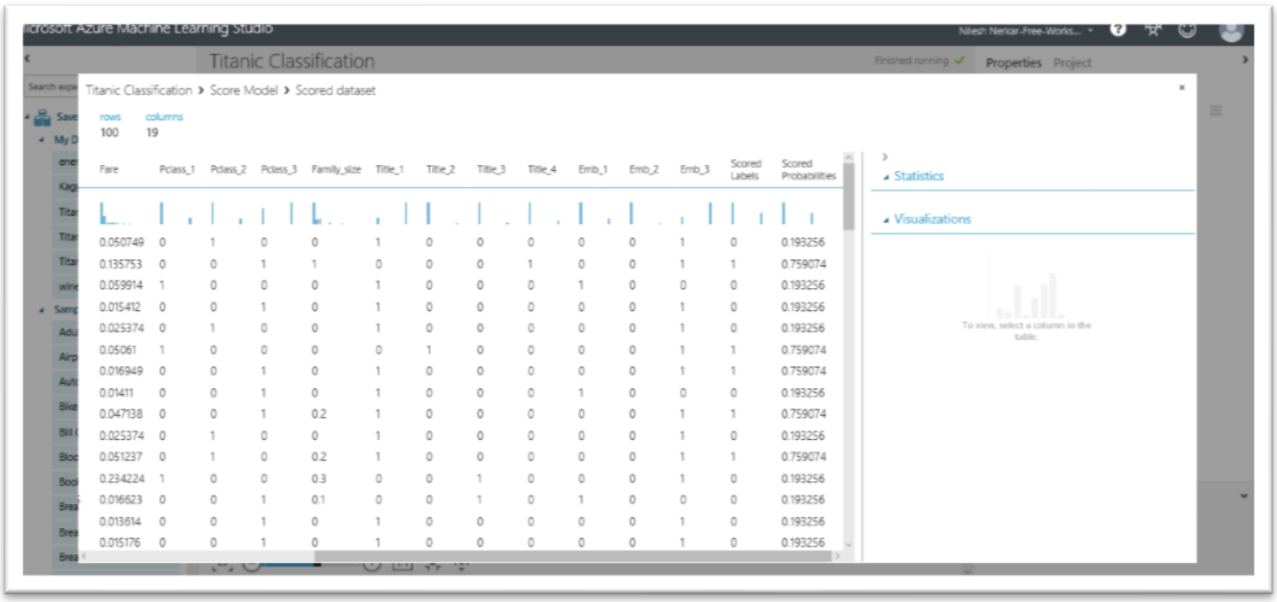
Since we have testing dataset available, we won use SPLIT DAT here, and continue with the selected features:



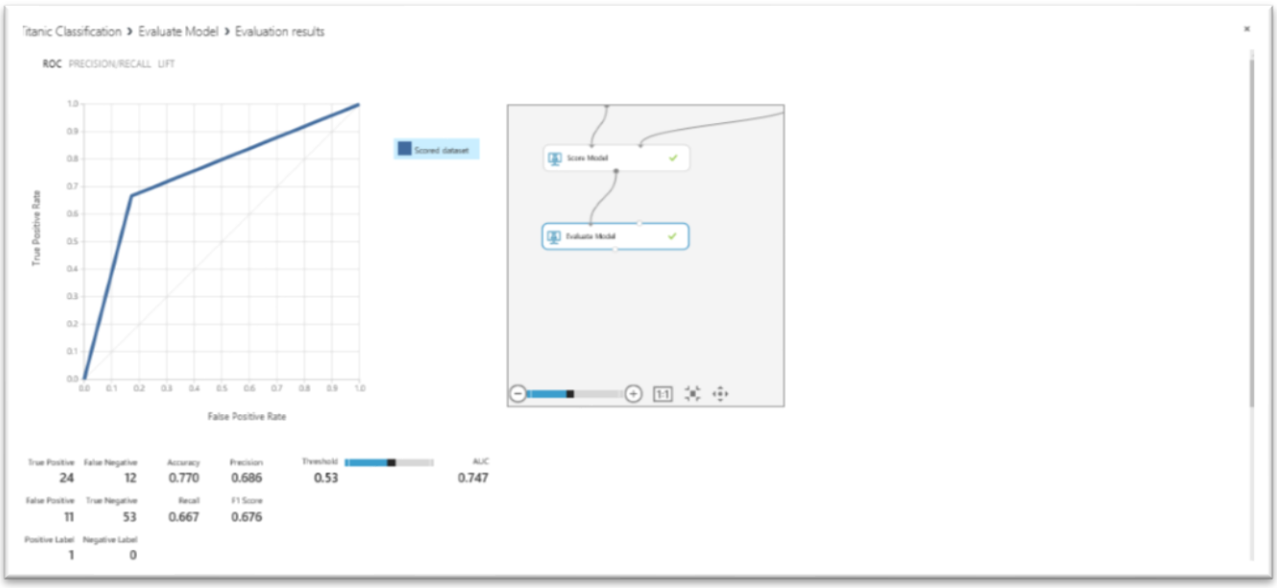
After training the model we can score and evaluate our model using following:



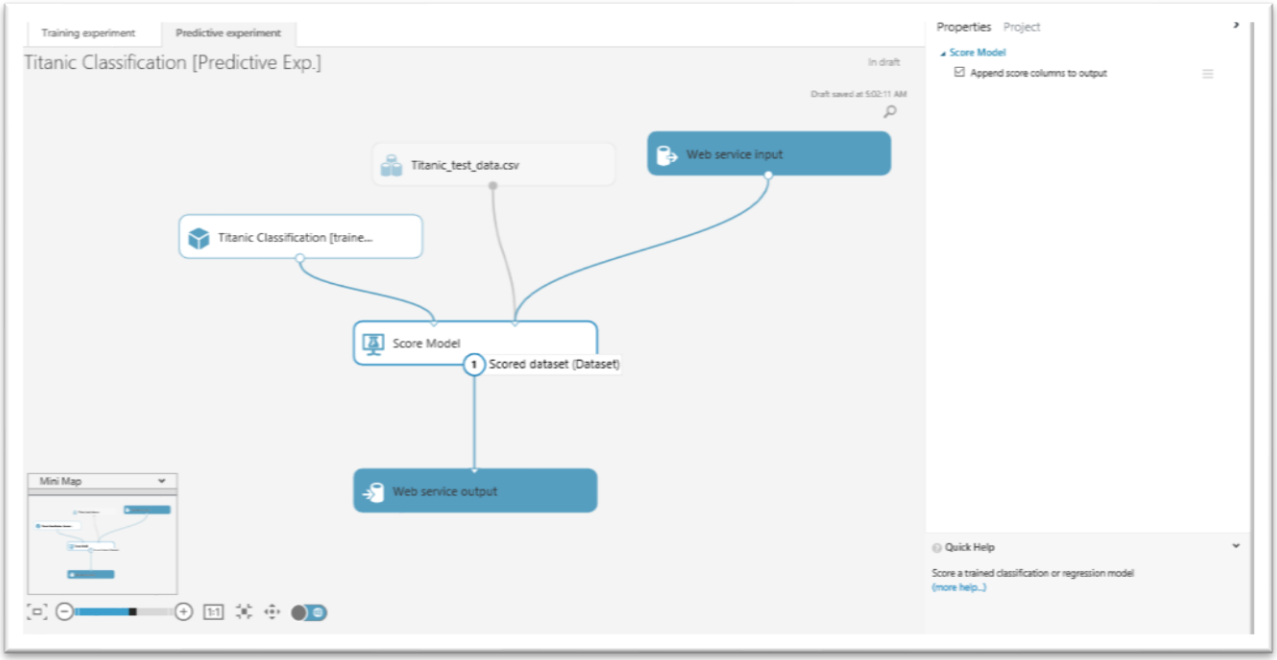
On click of SCORE MODEL we can visualize the Scored Labels and Scored Probabilities:



On click of EVALUATE MODEL we can see the Confusion matrix:

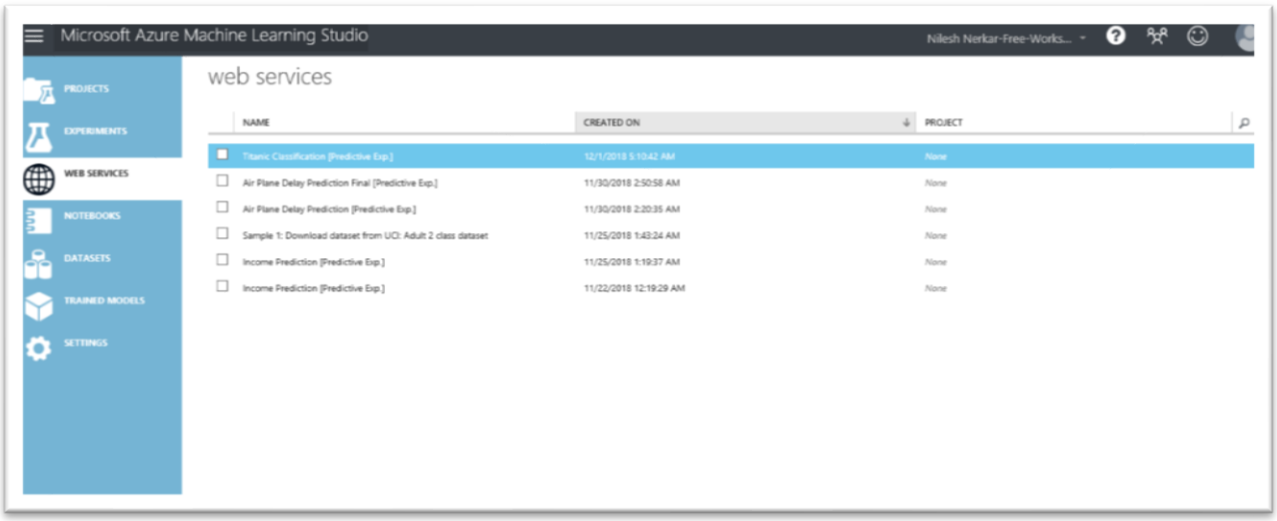


On click of Set up a Web Service we can create a predictive experiment with input and output feature selection for the REST API:

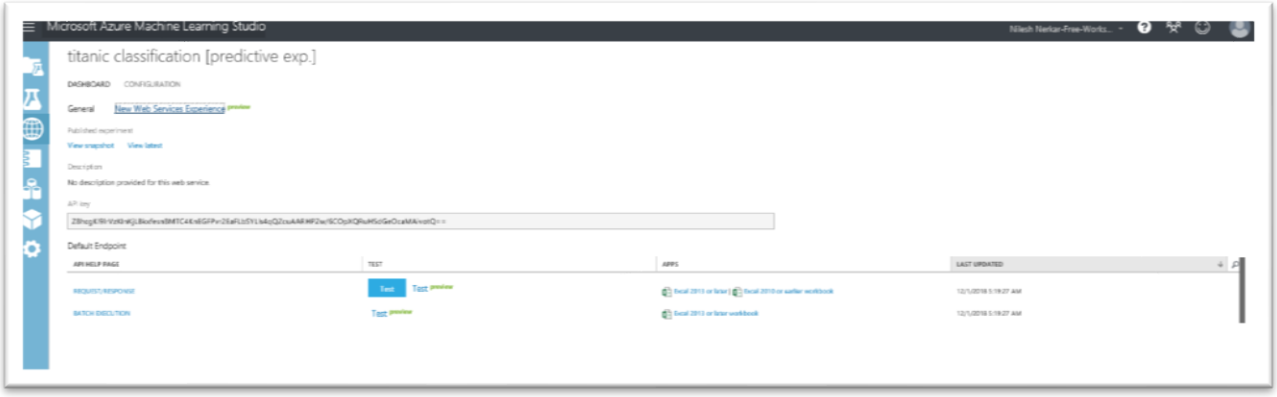


Since we only need the Target scored labels, we can select those columns in the output and provide only those features which are been trained using SELECT COLUMNS IN DATASET:

All the web service created can be seen under WEB SERVICES:

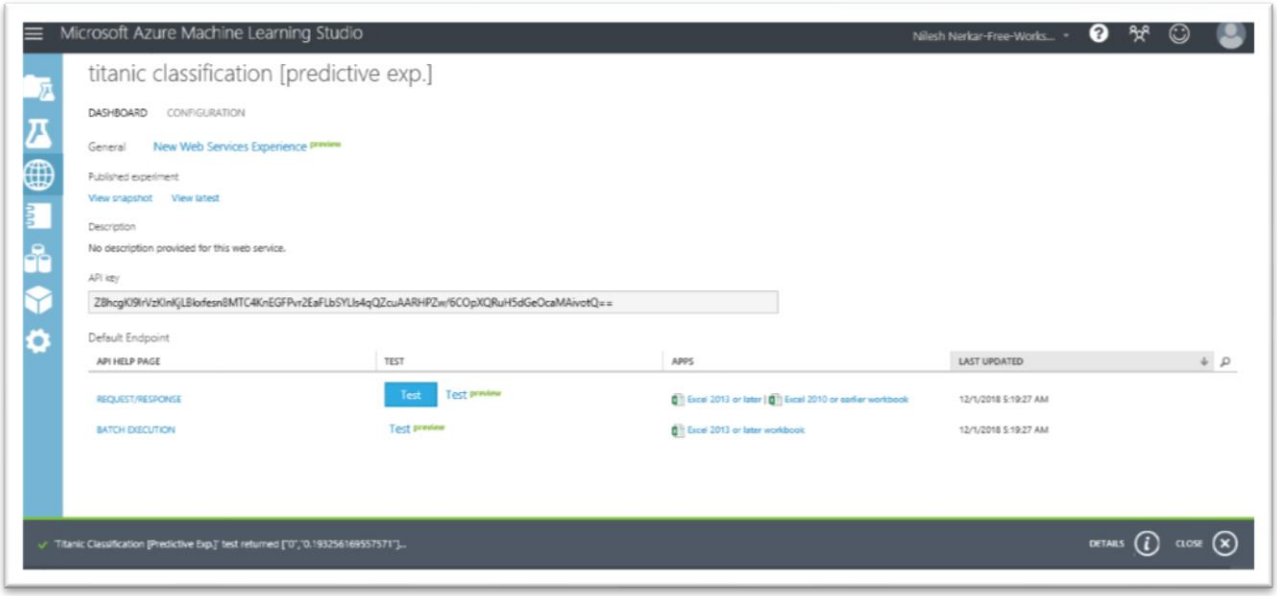


After Deploying the model using one click on DELPOY option, we can see the following, were we can export our prediction to excel or test using the available UI (TEST)



The following is the UI of the ML Studio:

We can see the output here itself:



By clicking New Web Services Experiences, we can use the AZURE's web service which has a better UI, We can also create a Rest API using the information provided here: