# Insights Form Red Wine Quality:

Red wine has various components and assuming that the variables are measured based on grams/ liters.

Residual Sugar is maintained less till the 75th percentile but it is maintained more than

Performance Classification:

There are 11 main components that is included in the process of making a red wine and 1 target variable which tells the quality of the wine. And divided the data into train and test, where I took 25% of my data as test data.

Accuracy:

There is a slight change in accuracy by 0.00851 when we used NN model. It means the accuracy has decreased or changed when the hidden layers to perform the task is decreased or changed every time and there are also some points of meta that has to be followed for a good wine preparation which is been specified i.e., 0.73 grams to be maintained in the mixture of wine and mixture should contain:

Free SO2 - 0.022 g/l

pH – 32 ppm

1 liter = 3.785 gallons

So ideal calculation is

* Ppm need as g/l X liters per gallon X gallons of wine

% of active SO2 in Meta

So according to the ideal scenario the rate of meta should be maintained in preparation of good wine is 0.73 grams of the meta

As per our data I found out that if you use any metric like (400,400) - (800,1000) hidden layer combinations then we are getting only 0.625 grams

Confusion matrix:

It has been told that higher the diagonal of the metric is better the prediction and which indicates many correct predictions and my confusion matrix is in 6X6 metric.

Confusion matrix helped me to understand that metric but the difference between both normal matrix and with Neural network has changed the values with slight changes but at what variable there is a false negatives unable to identify but by seeing the variance or difference it is understood that impliedly it is near Free sulfur dioxide and Total Sulfur dioxide and also near pH and Sulphates.