

# **A Review Of Liver Patient Analysis Methods Using Machine Learning**

## **Define Problem/Problem Understanding**

## **Literature Survey**

With a growing trend of sedentary and lack of physical activities, diseases related to liver have become a common encounter nowadays. In rural areas the intensity is still manageable, but in urban areas, and especially metropolitan areas the liver disease is a very common sighting nowadays. Problems with liver patients are not easily discovered in an early stage as it will be functioning normally even when it is partially damaged. An early diagnosis of liver problems will increase patients survival rate. There are various algorithms that have been used with varying levels of success. Logistic regression, decision tree, random forest, and neural networks have all been used and have been able to accurately predict liver disease

The liver disorders are find out by taking blood sample of the patient. Here in the dataset there are two categories of blood tests which are thought to be sensitive to liver disorders or not sensitive to liver disorders. The author used WEKA tool for classifying the data and the data is then evaluated using 10-fold cross validation. Here 70% of dataset is used for training data. The remaining 30% for test data. WEKA tool is used to compare the performance accuracy of different algorithms for liver disease dataset.

The classification is done using the algorithms. Two learning performance evaluators are present. The first will split the dataset into training and test data and the second one will perform the cross validation to find out the best algorithm. The algorithm is selected on the basis of its performance and the prediction of classification models are compared on the test data.

The author evaluated the performance of the algorithms on the basis of accuracy and time taken for the whole execution of the algorithm. In this paper FT Tree takes less time when evaluated on the liver dataset and it gives the more accuracy as compared to other algorithms.