

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. Health care and medicine handles huge data on daily basis. This data comprises of information about the patients, diagnosis reports and medical images. It is important to utilize this information to decipher a decision support system. To achieve this it is important to discover and extract the knowledge domain from the raw data. It is accomplished by knowledge discovery and data mining (KDD) [3]. The implementation of data mining techniques is widespread in biological domain. In recent years, liver disorders have excessively increased and liver diseases are becoming one of the most fatal diseases in several countries. In this study, liver patient datasets are investigate for building classification models in order to predict liver disease. Several feature model construction and comparative analysis are implemented for improving prediction accuracy of Indian liver patients. Different studies have been conducted for classification of liver disorders, they are discussed briefly. Classification algorithm is one of the greatest significant and applicable data mining techniques used to apply in disease prediction. Classification algorithm is the most common in several automatic medical health diagnoses. Many of them show good classification accuracy. In another study the UCI liver dataset was used for selection of sub features based on random forest classifier with multi-layer perceptron induced [4]. Different approaches for artificial intelligence for the liver patient dataset, precise predictions of liver failure were applied [5, 6, 7 and 8]. Identification of liver infection at preliminary stage is important to combat the frequency and severity deaths of patients in India. The patients must be screened based on initial symptoms for development of personalized therapy. In this study, an attempt is made for prediction of liver disease in patients using data mining techniques. Based on the review of literature, it was depicted that the past research studies have implemented different data mining techniques for classification of liver dataset. 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.

5. REFERENCES

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