LITERATURE SURVEY

TITLE: " A Comparative Analysis of Unsupervised Machine Techniques for Liver Disease Prediction"

AUTHOR: Varun Vats

YEAR: 2018

He considered three different ML (Machine Learning) algorithms. A comparison of these algorithms had been carried out for evaluating their forecasting accuracy and computing intricacy . These algorithms included AP (Affinity Propagation), K means and DBSCAN. This work was dedicated to the medical dataset based on lever disorders. This work made use of the Silhouette coefficient to measure the comparative efficiency of the considered algorithmic approaches.

TITLE : "Prognosis of Liver Disease using Machine Learning Algorithms"

AUTHOR: Vyshali J Gogi

YEAR : 2018

He stated that the healthcare sector had a lot of data but this data was of no use [17]. This ample data required a leading analytic tool so that the hidden relationship and the valuable knowledge could be determined. The liver disease referred to the medical condition of the human liver-related to the human liver. The liver diseases led to sudden changes in health conditions that governed the functioning of the liver affecting other internal body organs. This work made use of several classification algorithms based on data mining. These algorithms included DT (Decision Tree), LD (Linear Discriminant), SVM Fine Gaussian, and LR (Logistic Regression). This work made use of Lab-based metrics of patients in the form of a liver dataset.

TITLE: “Accuracy Prediction Using Machine Learning Techniques for Indian Patient Liver Disease”

AUTHOR: Auxilia

YEAR: 2018

She stated that the use of medical datasets had attracted the medical experts globally [18]. The use of ML (Machine Learning) algorithms was quite common as a branch of making selection expressively helpful networks for the prediction of diseases by arranging therapy-based datasets. Grouping schemes had been generally employed as a segment of the curative domain for extracting order more efficiently as compared to a signal classification model. The disorders of the Liver malady could be described as liver damage or sickness. Liver disorder can be categorized into several categories. This work made use of standard Indian liver illness patient records as a database for providing support to the researcher

TITLE: “New Fuzzy-ANWKNN algorithm for the successful prediction of liver disorder”

AUTHOR: Pushpendra Kumar

YEAR: 2019

He stated that it was a very difficult task for the doctors to detect the consequences of liver disorders on a person . In general, researchers used datasets based on LFT (Liver Function Test) for implementing classification algorithms so that the predictions about liver disorders could be generated. The dataset based on ground truth had several problems such as a class imbalance in the liver disorder data. With regard to the majority classes, the classic algorithms of classification generated influenced outcomes. This work presented a new Fuzzy-ANWKNN algorithm for the successful prediction of liver disorder.

TITLE: “To accurately predict liver disorder by means of several data mining algorithms”

AUTHOR: Sanjay Kumar

YEAR: 2018

He described different classification approaches by implementing them on the dataset of patients suffering from liver diseases . The main objective here was to accurately predict liver disorder by means of several data mining algorithms. This work performed the analysis using the dataset of real-time patients to build classification paradigms for the prediction of liver diseases. This work implemented five classification algorithms on the used dataset. This work analyzed different metrics such as precision, recall, and accuracy for determining the efficiency of the implemented classification models.

TITLE: ” Liver disease prediction by using different decision tree techniques”

AUTHOR: Nazmun Nahar and Ferdous Ara

YEAR: 2018

They stated that their research work explores the early prediction of liver disease using various decision tree techniques. The liver disease dataset which is select for this study is consisting of attributes like total bilirubin, direct bilirubin, age, gender, total proteins, albumin, and globulin ratio. The main purpose of this work is to calculate the performance of various decision tree techniques and compare their performance. The decision tree techniques used in this study are J48, LMT, Random Forest, Random tree, REPTree, Decision Stump, and Hoeffding Tree. The analysis proves that Decision Stump provides the highest accuracy than other techniques.

TITLE: "Prediction of liver fibrosis stages by machine learning model: A decision tree approach"

AUTHOR: Heba Ayeldeen

YEAR: 2015

This work made by using an ML algorithm based on DT for predicting the level of liver fibrosis in every patient . The outcomes revealed that DT (Decision Tree) classifier achieved a classification accuracy of 93.7%. This accuracy rate was higher than the accuracy rate reported by other investigations in the same conditions.

TITLE: Supervised classification and prediction of fibrosis seriousness using ultrasonic images

AUTHOR: C. A. Prajith

YEAR: 2016

He described the growth of scar tissue due to inflammation, infection, or injury so called liver fibrosis.This disease could be the reason for liver cirrhosis. The use of various non-invasive imaging techniques was quite common for the treatment of liver fibrosis. These techniques included MRI, CT, Electrography, and ultrasound. This study was focused on the extraction of texture features from liver images of ultrasound. This work implemented various classification models such as ANN, GMM, and SVM for classifying the risk level of the liver fibrosis. SVM has a specificity of 95 % , the sensitivity of 93.33%, and an accuracy of 94 %.