Visualizing and Predicting Heart Diseases with an Interactive Dash Board

1.Disease Prediction Using Machine Learning algorithms

The wide adaptation of computer-based technology in the health care industry resulted in the accumulation of electronic data. Due to the substantial amounts of data, medical doctors are facing challenges to analyze symptoms accurately and identify diseases at an early stage. However, supervised machine learning (ML) algorithms have showcased significant potential in surpassing standard systems algorithms were Naïve Bayes (NB), Decision Trees (DT), K-Nearest Neighbor (KNN). As per findings, Support Vector Machine (SVM) is the most adequate at detecting kidney diseases and Parkinson's disease. The Logistic Regression (LR) performed highly at the prediction of heart diseases. Finally, Random Forest (RF), and Convolutional Neural Networks (CNN) predicted in precision breast diseases and common diseases, respectivelyfor disease diagnosis and aiding medical experts in the early detection of high-risk diseases. In this literature, the aim is to recognize trends across various types of supervised ML models in disease detection through the examination of performance metrics. The most prominently discussed supervised ML.

Keywords: Health Care,Supervised Machine Learning,Diseases prediction

Author: Marouance Ferjani

2.A Review on Heart Disease Prediction Using Machine Learning Techniques

Heart disease is one of the most fatal problems in the whole world, which cannot be seen with a naked eye and comes instantly when its limitations are reached. Therefore, it needs accurate diagnosis at accurate time. Health care industry produced huge amount of data every day related to patients and diseases. However this data is not used efficiently by the researchers and practitioners. Today healthcare industry is rich in data however poor in knowledge. There are various data mining and machine learning techniques and tools available to extract effective knowledge from databases and to use this knowledge for more accurate diagnosis and decision making. Increasing research on heart disease predicting systems, it become significant to summarize the completely incomplete research on it. The

main objective of this research paper is to summarize the recent research with comparative results that has been done on heart disease prediction and also make analytical conclusions. From the study, it is observed Naive Bayes with Genetic algorithm; Decision Trees and Artificial Neural Networks techniques improve the accuracy of the heart disease prediction system in different scenarios. In this paper commonly used data mining and machine learning techniques and their complexities are summarized.

Keywords: Data Mining, Machine Learning, Heart Disease, Classification, Naïve bayes, Artificial RuleNaturalNetworks, DecisionTrees, Associative

Author:Pawan chaurasia

3.Disease Prediction From Various Symptoms Using Machine Learning

Accurate and on-time analysis of any health-related problem is important for the prevention and treatment of the illness. The traditional way of diagnosis may not be sufficient in the case of a serious ailment. Developing a medical diagnosis system based on machine learning (ML) algorithms for prediction of any disease can help in a more accurate diagnosis than the conventional method. We have designed a disease prediction system using multiple ML algorithms. The data set used had more than 230 diseases for processing. Based on the symptoms, age, and gender of an individual, the diagnosis system gives the output as the disease that the individual might be suffering from. The weighted KNN algorithm gave the best results as compared to the other algorithms. The accuracy of the weighted KNN algorithm for the prediction was 93.5 %. Our diagnosis model can act as a doctor for the early diagnosis of a disease to ensure the treatment can take place on time and lives can be saved.

Keywords: Disease Prediction, Mechine Learning, Symptoms

Author: Rinkal Keniya

4.A Survey on prediction Techniques of Heart Disease Using Machine Learning

Abstract Heart is one of the most important part of the body. It helps to purify and circulate blood to all parts of the body. Most number of deaths in the world are due to Heart Diseases. Some symptoms like chest pain, faster heartbeat, discomfort in breathing are recorded. This data is analysed on regular basis. In this review, an overview of the heart disease and its current procedures is firstly introduced. Furthermore, an in-depth analysis of the most relevant machine learning techniques available on the literature for heart disease prediction is briefly elaborated. The

discussed machine learning algorithms are Decision Tree, SVM, ANN, Naive Bayes, Random Forest, KNN. The algorithms are compared on the basis of features. We are working on the algorithm with best accuracy. This will help the doctors to assist the heart problem easily

Keywords: Machine Learning, Prediction, Classification Technique, Decision Tree, Accuracy

Authors: Mangesh Limbitote, kedar Damkondwar, Pushkar Patil

5.Analyzing The Performance of Machine Learning Techniques in Disease Prediction

The history of data stored can be used to forecast potential patterns and help companies make competitive decisions to increase their success and benefits. Many analysts look at healthcare sector data to identify and forecast illnesses in order to benefit patients and physicians in a variety of ways. This study is concerned with the diagnosis and estimation of heart disease. Heart disease is one of the most dangerous illnesses for humans, leading to death all over the world. Many different groups of researchers have used knowledge exploration methods in diverse fields to forecast heart disease and have shown acceptable degrees of precision. There were no real-time methods for analyzing and forecasting heart disease in its early stages. For the prediction of heart disease, decision trees are used to analyze various training and evaluation datasets. Classification algorithms such as Naive Bayes, ID3, C4.5, and SVM are being investigated. The UCI machinery heart disease data set is used in experimental studies.

Keywords: Machine Learning, Prediction, Classification Technique, Decision Tree, Accuracy

Author: Rijwan Khan