Literature survey

Date	24 September 2022
Team ID	PNT2022TMID45847
Project Name	Visualizing and predicting heart diseases with an interactive dashboard
Maximum Marks	2 Marks

1. Title: Heart Disease Prediction using Exploratory Data Analysis

Author: R.Indrakumari ,T.Poongodi, Soumya Ranjan Jena

In this paper, the risk factors that causes heart disease is considered and predicted using K-means algorithm and the analysis is carried out using a publicly available data for heart disease. The dataset holds 209 records with 8 attributes such as age, chest pain type, blood pressure, blood glucose level, ECG in rest, heart rate and four types of chest pain. To predict the heart disease, K-means clustering algorithm is used along with data analytics and visualization tool. The paper discusses the pre-processing methods, classifier performances and evaluation metnes. In the result section, the visualized data shows that the prediction is accurate.

2. Title: Using Data Visualization to Analyze the Correlation of Heart Disease Triggers and Using Machine Learning to Predict Heart Disease

Author: Xinyu zhang

Regarding the different causes of heart disease, analyzing what causes heart disease has become main stream nowadays. After an in-depth understanding of data analysis and machine learning-related knowledge, data analysis and data training are carried out on a dataset containing 14 columns of features. First, Python is used to visualize and analyze data. And then train_test_split is used to divide the data into the training set and the learning set. At last, three methods including logistic regression, decision tree classifier, and random forest classifier are used to train the data and observe which method gets the best effect.

3. Title: Big Data Analytics in Heart Attack Prediction

Author: Cheryl Ann Alexander, Lidong Wang

Acute myocardial infarction (heart attack) is one of the deadliest diseases patients face. The key to cardiovascular disease management is to evaluate large scores of datasets, compare and mine for information that can be used to predict, prevent, manage and treat chronic diseases such as heart attacks. Big Data analytics, known in the corporate world for its valuable use in controlling, contrasting and managing large datasets can be applied with much success to the prediction, prevention, management and treatment of cardiovascular disease. Data mining, visualization and Hadoop are technologies or tools of big data in mining the voluminous datasets for information. Per the studies analyzed, Big Data analytics is useful in predicting heart attack, and the technologies used in Big Data are extremely vital to the management and tailoring of treatment for cardiovascular disease. And as the use of Big Data in healthcare increases, more useful personalized medicine will be available to individual patients.

4. Title: Heart disease prediction using data mining

Author: Sairam,Santhosh Voruganti

Medical services provide gigantic information on every day ground having diverse structures like printed ,images, numbers pool and so forth. However, there is absence of devices accessible in health careto process this data. Data mining frame works are utilized to extricate information from this data which can be utilized by media proficient individual to figure future procedures. Heart illness is the primary driver of death in the masses. Early recognizing and hazard expectations are essential for patient's medicines and specialists' analysis. Data mining algorithms like Decision trees (J48), Bayesian classifiers, Multilayer preceptor, Simple logistic and Ensemble techniques are utilized to determine the heart ailments. In this work, different data mining classification procedures are analysed for testing their precision and execution on preparing medicinal informational index. The classification results will be envisioned by various representation procedures like 2D diagrams, pie graphs, and different techniques. The beforehand mentioned calculations are analyzed and assessed based on their exactness, time utilization factor, territory under ROC and so on.

5. Title: Big data analytics in heart diseases prediction
Author: Ahmed ismail, samir abdlerazek, henawy

The healthcare data can be employed to develop a health prediction system that can improve in heart disease prevention. Big data on health care, including patient records, clinical notes, diagnosis, parents and family past ailments, hospitals, and scan results can aid in the phase of disease identification and prediction. The emerging machine learning method offers an important framework for Forecasting cardiac diseases. An advanced Support Vector Machine (SVM) classifier was used by the program to conduct parameter tuning to improve classification accuracy and performance. The proposed work aims to develop a real-time prediction system for health issues based on big medical data processing on the cloud. In the proposed scalable system, the medical parameters are sent to Apache Spark to extract the attributes from the data and to apply the proposed machine learning algorithm aiming to predict the healthcare risks and send them as alerts and recommendations to the users and the healthcare providers as well. The purpose of this paper is to evaluate the impact of applying machine learning algorithms using electronic health records. The proposed work aimed to provide an effective recommendation system using streaming medical data, historical data on the user profile, and knowledge database to provide users with the best recommendations and alerts in real-time according to the sensors measurements. The proposed system of prediction could offer high accuracy in comparison with literature work with the predictability of 90.6 for heart disease.