LITERATURE SURVEY

VISUALIZING AND PREDICTING HEART DISEASE WITH AN INTERACTIVE DASHBOARD

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1. **Big Data Analytics in Heart Attack Prediction**

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. This review offers the latest information on Big Data analytics in healthcare, predicting heart attack, and tailoring medical treatment to the individual. The results will guide providers, healthcare organizations, nurses, and other treatment providers in using Big Data technologies to predict and manage heart attack as well as what privacy concerns face the use of Big Data analytics in healthcare. Effective and tailored medical treatment can be developed using these technologies

LINK:

https://www.researchgate.net/profile/Lidong-Wang/publication/316851031_Big_Data_Analytics_in_Heart_Attack_Prediction/links/595fd6c4a6fdccc9b1c47e90/Big-Data-Analytics-in-Heart-Attack-Prediction.pdf

2. **A Review on Heart Disease Prediction using Machine Learning and Data Analytics Approach**

Heart is the next major organ comparing to brain which has more priority in Human body. It pumps the blood and supplies to all organs of the whole body. Prediction of occurrences of heart diseases in medical field is significant work. Data analytics is useful

for prediction from more information and it helps medical centre to predict of various disease. Huge amount of patient related data is maintained on monthly basis. The stored data can be useful for source of predicting the occurrence of future disease. Some of the data mining and machine learning techniques are used to predict the heart disease, such as Artificial Neural Network (ANN), Decision tree, Fuzzy Logic, K-Nearest Neighbour(KNN), Naïve Bayes and Support Vector Machine (SVM). This paper provides an insight of the existing algorithm and it gives an overall summary of the existing work

LINK:

https://www.researchgate.net/publication/327722009_A_Review_on_Heart_Disease_Prediction_using_Machine_Learning_and_Data_Analytics_Approach

3. **A Comprehensive Review on Heart Disease Prediction Using Data Mining and Machine Learning Techniques**

Heart disease is one of the major causes of life complicacies and subsequently leading to death. The heart disease diagnosis and treatment are very complex, especially in the developing countries, due to the rare availability of efficient diagnostic tools and shortage of medical professionals and other resources which affect proper prediction and treatment of patients. Inadequate preventive measures, lack of experienced or unskilled medical professionals in the field are the leading contributing factors. Although, large proportion of heart diseases is preventable but they continue to rise mainly because preventive measures are inadequate. In today's digital world, several clinical decision support systems on heart disease prediction have been developed by different scholars to simplify and ensure efficient diagnosis. This paper investigates the state of the art of various clinical decision support systems for heart disease prediction, proposed by various researchers using data mining and machine learning techniques. Classification algorithms such as the Naïve Bayes (NB), Decision Tree (DT), and Artificial Neural Network (ANN) have been widely employed to predict heart diseases, where various accuracies were obtained. Hence, only a marginal success is achieved in the creation of such predictive models for heart disease patients therefore, there is need for more complex models that incorporate multiple geographically diverse data sources to increase the accuracy of predicting the early onset of the disease.

LINK:
https://www.researchgate.net/publication/344998779_A_Comprehensive_Review_on_Heart_Disease_Prediction_Using_Data_Mining_and_Machine_Learning_Techniques

4. **Big data analysis for heart disease detection system using map reduce technique**

In today's world, the enormous information in health care is to be processed in order to identify, diagnose, detect and prevent the various diseases. Big data analysis is the challenging one because big data contain large amount of records. It is proposed to develop a centralized patient monitoring system using big data. In the proposed system, large set of medical records are taken as input. From this medical dataset, it is aimed to extract the needed information from the record of heart patients using map reduce technique. Heart disease is a major health problem and it is the leading causes of death throughout the world. Early detection of heart disease has become an important issue in the medical research fields. For heart disease detection, some features are analyzed such as RR interval, QRS interval and QT interval. The classification process states whether the patient is normal or abnormal and in the detection step using map reduce technique to detect the disease and reduce the dataset. Thus, the proposed system helps to classify a large and complex medical dataset and detect the heart disease.

LINK:

https://ieeexplore.ieee.org/abstract/document/7725360