VISUALIZING AND PREDICTING HEART DISEASES WITH AN INTERACTIVE DASH BOARD

LITERATURE SURVEY

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SNO	PAPER	AUTHOR	YEAR	SHORT DESCRIPTION	RESULT AND ACCURACY	FUTURE WORK AND ANALYSIS
1	An Imbalanced-Data Processing Algorithm for the Prediction of Heart Attack in Stroke Patients	Meng wang , Xinghua yao , Yixiang chen	2021	This study designs an algorithm by leveraging random under sampling, clustering and oversampling techniques, which is called under sampling clustering-oversampling algorithm (shortly, UCO algorithm). The UCO algorithm generates nearly balanced data which are utilized to train machine-learning models for predicting heart attack.	Accuracy is 70.29% and the Precision is 70.05%.	In the future, application to other imbalanced data for the proposed UCO algorithm will be investigated. Also, its combination with deep neural network is considered. A software system for heart attack prediction in stroke patients will be developed based on the algorithm UCO and random forest.
2	A smart healthcare monitoring system for heart disease prediction based on ensemble deep learning and feature fusio	FarmanAliShakerEl-SappaghS.M.RiazulIslamDaehanKwakAmjadAliMuhammadImranKyung-SupKwak[1][19]	2020	In this study, a smart healthcare system is proposed for heart disease prediction using ensemble deep learning and feature fusion approaches. The feature fusion method combines the extracted features from both sensor data and electronic medical records to generate valuable healthcare data.	An accuracy of 98.5 is achieved.	In future work, the performance of feature fusion will be enhanced by using data mining techniques to produce a more refined dataset for heart disease diagnoses. Novel methods will be designed for feature reduction to

						handle huge numbers of features and large volumes of healthcare records.
3	Heart Disease Detection by Using Machine Learning Algorithms and a Real-Time Cardiovascular Health Monitoring System	Shadman Nashif1, Md. Rakib Raihan2, Md. Rasedul Islam2, Mohammad Hasan Imam2	2018	In this study, a tentative design of a cloud-based heart disease prediction system had been proposed to detect impending heart disease using Machine learning techniques. For the accurate detection of the heart disease, an efficient machine learning technique should be used which had been derived from a distinctive analysis among several machine learning algorithms in a Java Based Open Access Data Mining Platform, WEKA.	An accuracy level of 97.53% accuracy was found from the SVM algorithm along with sensitivity and specificity of 97.50% and 94.94% respectively.	In future works, Photoplethysmography (PPG) based blood pressure sensor module or electronic sphygmomanometer can also be connected to the Arduino which will be capable of transmitting real-time data to the server. This sensor is not added to the designed patient monitoring system due to the unavailability of a clinically recognized system at this moment, although huge research is going on the development of PPG based blood pressure monitor
4	Survey on prediction and analysis the occurrence of heart disease using data mining techniques	Mr. ChalaBeyene, Prof. Pooja Kamat	2018	Analysing and predicting the occurrence of heart Disease Using Data Mining. Some machine algorithms used for predicting the occurrence of heart diseases are Support Vector Machine, Decision Tree, Naïve Bayes, K-Nearest Neighbour, and Artificial Neural Network.	SVM gives better accuracy of 85.6% and 82.56% SVM in parallel fashion gives better accuracy in comparison to sequential SVM	In future, it is proposed to determine the prediction performance of each algorithm and apply the proposed system for the area it needed and use more relevant feature selection methods to improve the accurate

						performance of algorithms.
5	Coronary Heart Disease Diagnosis using Deep Neural Networks	Kathleen H. Miaoa,Julia H. Miaoa	2018	In this study, an enhanced deep neural network (DNN) learning was developed to aid patients and healthcare professionals. The developed DNN learning model is based on a deeper multilayer perceptron architecture with regularization and dropout using deep learning.	Diagnostic accuracy of 83.67%, sensitivity of 93.51%, specificity of 72.86%, precision of 79.12%	In future work, the other enhanced methods that would further raise the diagnostic accuracy of the deep learning model by utilizing deep learning based on morphologic class pattern predictions will be investigated.