

YEAR	TITTLE	AUTHOR DETAILS	METHODOLOGY	FUTURE ENHANCEMENTS
2016	Efficient Heart Disease Prediction System	Prof. (Dr.) Kanak Saxenab	Some of the data mining and machine learning techniques are used to predict heart diseases, such as Artificial Neural Network (ANN), Random Forest, and Support Vector Machine (SVM). Prediction and diagnosing of heart disease become a challenging factor faced by doctors and hospitals both in India and abroad	In future an intelligent system may be developed that can lead to selection of proper treatment methods for a patient diagnosed with heart disease. A lot of work has been done already in making models that can predict whether a patient is likely to develop heart disease or not.
2021	Heart Disease Risk Prediction Using Machine Learning Classifiers with Attribute Evaluators	S. Pranavanand	As a first step, we collected the Cleveland heart disease dataset in .csv format from the UCI machine learning repository. Then, we imported the dataset into the software tool and explored the attributes, types, value ranges, and other statistical information. The next step was pre-processing the data, which included tasks such as looking for the missing values in the dataset and replacing missing values, either with the user constant or mean value depending on the type of attribute, to make sure the	There is a huge scope to explore various machine learning algorithms and feature selection techniques. In the future, we intend to combine multiple datasets to obtain a higher number of observations and conduct more experiments by selecting appropriate attributes to improve the classifier's predictive performance.

			<p>machine learning classifiers provide better performance. Thereafter, classification was performed with cross-validation using several machine learning algorithms, such as NB, LR, SMO, IBk, AdaBooostM1 + DS, AdaBoostM1 + LR, bagging + REPTree, bagging + LR, JRip, and RF using the full set of attributes.</p>	
2022	Analyzing the impact of feature selection on the accuracy of heart disease prediction	Muhammad Salman Pathan a,b	<p>DATASET CVD Framingham Pre-processing Feature correlation analysis</p>	<p>In the intended future work, we will try to work on enhancing the prediction accuracy by using a vast combination of ML and deep learning models to obtain the best feasible model for the heart disease diagnosis. We will benchmark our analysis on additional datasets as a part of our future work. We will also try to use more than one feature selection technique to obtain more feasible feature subsets which are more direct with medical studies.</p>
2022	Classifier identification using deep learning and machine learning	Tanmay Sinha Roy	<p>The proposed methodology includes steps, where first step is referred as the</p>	<p>In the subsequent research, the objective will be to use CNN based</p>

	algorithms for the detection of valvular heart diseases		collection of the data than in second stage it extracts significant values than the 3rd is the preprocessing stage where we explore the data. Data preprocessing deals with the missing values, cleaning of data and normalization depending on algorithms used .	deep learning model and random forest classifier to develop a low-cost IoT-enabled Valvular Heart disease screening system for rural use.
2020	Machine learning for the evaluation of the presence of heart disease	Vasco Poncianoc,d	Regarding the automatic identification of observations that revealed the presence or absence of health disease, the authors implemented several machine learning methods, such as Neural Network [13], DT [14], kNN [15], CN2 rule inducer, SVM [5], and SGD [17], which the details on the implementation are presented in Table 2. The dataset is composed of data related to individuals between 29 and 77 years old, which are 183 are men, and 87 are women. The resting blood pressure of the sample is between 94 and 200 bpm.	The accuracy values give high strength to this study and increase the speed and capacity of the sensor electrocardiogram. With the use of automatic detection methods, it speeds up the detection and ability to generalize its use by different fringes of society. It also supports health professionals in the early detection of symptoms. With the combination of these types of methods, we can change and help in the development of systems. These systems may be diverse, including a pacemaker with even more capacity, and devices to assist people with identified problems
2022	Heart sound classification using signal processing and machine learning algorithms	Seyed Taghi Akhavan Niaki b	Selection of the best algorithm from performance characteristics of the models to develop a cloud-based intelligent heart disease prediction mobile application.	Although various types of digital stethoscopes are available to the medical community, none can analyze sounds and differentiate the disease. As such, examining and analyzing heart

			<p>➤ Storing of doctor and patient information following registration of patients and doctors separately through the application in a cloud-based server for analysis.</p> <p>➤ A full-fledged tentative design of an android application with respective criteria has been shown in the Analysis and Results section.</p> <p>➤ On the application interfaces, the patient can input all parameters of heart disease manually and they can input sensor data like heartbeat using a specific button. Hence, they can predict whether they have heart disease or not.</p>	<p>sounds with the help of artificial intelligence algorithms can be a basis to build a device in the future to help heart specialists to make better decisions. The concepts of the Internet of Things (IoT) can also be combined with the concepts mentioned in this study to provide a basis for creating such a device in the future.</p>
2020	HEART DISEASE PREDICTION USING MACHINE LEARNING TECHNIQUES	Kiranjit Kaur	<p>Some of the data mining and machine learning techniques are used to predict heart diseases, such as Artificial Neural Network (ANN), Random Forest, and Support Vector Machine (SVM). Prediction and diagnosing of heart disease become a challenging factor faced by doctors and hospitals both in India and abroad.</p>	<p>Machine learning used for diagnosing heart disease which helps both healthcare professionals and patients. It is still working for various fields. As observed from the comparison table, most of the researchers got the same dataset from the same source which is the UCI repository. So, there is a requirement for more high-quality datasets that will be published by various hospitals so that researchers can</p>

				have a good source for their prediction for the various diseases which helps in obtaining the good results with high accuracy.
2020	HEART DISEASE PREDICTION USING MACHINELEARNING ALGORITHM	Kaleeswari.M	In this system, the input details are obtained from the patient. Then from the user inputs, using ML techniques heart disease is analyzed. Now, the obtained results are compared with the results of existing models within the same domain and found to be improved. The data of heart disease patients collected from the UCI laboratory is used to discover patterns with NN, DT, Support Vector machines SVM, and Naive Bayes. The results are compared for performance and accuracy with these algorithms.	In this system, the input details are obtained from the patient. Then from the user inputs, using ML techniques heart disease is analyzed. Now, the obtained results are compared with the results of existing models within the same domain and found to be improved. The data of heart disease patients collected from the UCI laboratory is used to discover patterns with NN, DT, Support Vector machines SVM, and Naive Bayes. The results are compared for performance and accuracy with these algorithms.
2020	Diagnosis And Prediction Of Heart Disease Using Machine Learning Techniques	J.Jeyaganesan	The proposed methodology includes steps, where first step is referred as the collection of the data than in second stage it extracts significant values than the 3rd is the pre-processing stages where we can explore the data	In future the work can be enhanced by developing an internet application supported the Random Forest algorithm also employing a large dataset as compared to the one utilized in this analysis which can provide better results and help health professionals in predicting the disease effectively and efficiently.
2021	A Cardiovascular Disease Prediction using Machine Learning Algorithms	Rubini PE	The methodology for predicting cardiovascular disease was done	This algorithm is also used to find the heart disease prediction

			<p>by using following four algorithms and the results are compared.describes the architecture diagram for predicting cardio vascular disease.</p> <ol style="list-style-type: none"><li>1. Random Forest</li><li>2. Logistic Regression</li><li>3. Naive Bayes algorithm</li><li>4. Support Vector Machines</li></ol>	<p>percentage by knowing the correlation details between diabetes and heart diseases. The similar prediction systems can be built by calculating correlation between heart diseases and other diseases. Also new algorithms can be used to achieve increased accuracy. Better performance is obtained with more parameter used in these algorithms.</p>
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