

VISUALIZING AND PREDICTING HEART DISEASES WITH AN INTERACTIVE DASH BOARD

LITERATURE SURVEY

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S.NO	TITLE	AUTHORS	YEAR	JOURNAL	DESCRIPTION
1	Visualization and Prediction of Heart Diseases Using Data Science Framework	Vaibhav Gupta; Vaibhav Aggarwal; Shagun Gupta; Neeti Sharma; Kiran Sharma; Neetu Sharma	2021 August	2021 Second International Conference on Electronics and Sustainable Communication Systems (ICESC)	The main aim of this paper is to use various classification algorithms of data science framework to somehow detect the chances of having a heart disease. Also, the main aim of this research paper is to find out the most efficient classification algorithm that can help us to detect heart diseases at early stage. This algorithm can be used on heart records of the patient or by using it on classification reports.
2	Heart Disease Prediction using Exploratory Data Analysis	R.Indrakumari ; T.Poongodi; Soumya Ranjan Jena	2020 July	International Conference on Smart Sustainable Intelligent Computing and Applications under ICITETM2020	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 metrics. In the result section, the visualized data shows that the prediction is accurate.

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3	Prediction of Cardio-vascular Disease Using Machine Learning Algorithms	Kumar G; Dinesh; K Arumugaraj; Kumar D; Santhosh; V Mareeswari	2018 March	2018 International Conference on Current Trends towards Converging Technologies (ICCTCT)	In this paper, data pre-processing uses techniques like the removal of noisy data, removal of missing data, filling default values if applicable and classification of attributes for prediction and decision making at different levels. The performance of the diagnosis model is obtained by using methods like classification, accuracy, sensitivity and specificity analysis. This paper proposes a prediction model to predict whether people have a heart disease or not and to provide an awareness or diagnosis on that. This is done by comparing the accuracies of applying rules to the individual results of Support Vector Machine, Gradient Boosting, Random Forest, Naive Bayes classifier and logistic regression on the dataset taken in a region to present an accurate model of predicting cardiovascular disease.
4	Heart Disease Classification and Risk Prediction by Using Convolutional Neural Network	V.Archana Reddy; K Venkatesh Sharma	2021 June	International Journal of Aquatic Science, Vol 12, Issue 02, 2021	The proposed work in this paper includes Machine Learning-based classifiers to assess classification accuracy and the use of Deep Learning techniques to enhance the accuracy of heart disease prediction. The classification accuracy of the KNN, SVM, and Naive Bayes Classifiers is also compared.

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5	Using Data Visualization to Analyze the Correlation of Heart Disease Triggers and Using Machine Learning to Predict Heart Disease	Xinyu Zhang	2021 April	IMIP '21: 2021 3rd International Conference on Intelligent Medicine and Image Processing	In this paper 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. This article mainly uses numpy, matplotlib, pandas, seaborn and scikit-learn libraries in Python language for data analysis and processing.
6	Heart Disease Prediction Using Machine Learning	Chaimaa Boukhatem; Heba Yahia Youssef; Ali Bou Nassif	2022 February	2022 Advances in Science and Engineering Technology International Conferences (ASET)	This paper presents several machine learning approaches for predicting heart diseases, using data of major health factors from patients. The paper demonstrated four classification methods: Multilayer Perceptron (MLP), Support Vector Machine (SVM), Random Forest (RF), and Naïve Bayes (NB), to build the prediction models. Data preprocessing and feature selection steps were done before building the models. The models were evaluated based on the accuracy, precision, recall, and F1-score. The SVM model performed best with 91.67% accuracy.

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7	Heart disease prediction using machine learning algorithms	Harshit Jindal; Sarthak Agrawal; Rishabh Khera; Rachna Jain; Preeti Nagrath	2020 October	IOP Conference Series: Materials Science and Engineering, Volume 1022, 1st International Conference on Computational Research and Data Analytics (ICCRDA 2020) 24th October 2020, Rajpura, India	The research paper mainly focuses on which patient is more likely to have a heart disease based on various medical attributes. It prepares a heart disease prediction system to predict whether the patient is likely to be diagnosed with a heart disease or not using the medical history of the patient. It uses different algorithms of machine learning such as logistic regression and KNN to predict and classify the patient with heart disease.
8	A novel approach for heart disease prediction using strength scores with significant predictors	Armin Yazdani; Kasturi Dewi Varathan; Yin Kia Chiam; Asad Waqar Malik; Wan Azman; Wan Ahmad	2021 June	BMC Medical Informatics and Decision Making	This paper is motivated by the gap in the literature, thus proposes an algorithm that measures the strength of the significant features that contribute to heart disease prediction. The study is aimed at predicting heart disease based on the scores of significant features using Weighted Associative Rule Mining.