



AIUB DSpace Publication Details

Title	HEART DISEASE PREDICTION USING DATA MINING CLASSIFICATION ALGORITHMS		
Author(s) Name	S M RAHID HAQUE, MD. ATIK FOYSAL, ARUPKUMAR DAS, MD. SHAHIDUL ISLAM LEAON, MD. ABDULLAH - AL - JUBAIR		
Contact Email(s)	abdullah@aiub.edu		
Published Journal Name	Journal of Cardiovascular Disease Research		
Type of Publication	Journal		
Volume	12	Issue	3
Publisher	Journal of Cardiovascular Disease Research		
Publication Date	2021-12-03		
ISSN	0975-3583		
DOI	10.31838/jcdr.2021.12.03.369		
URL	http://www.jcdronline.org/index.php?mno=4859		
Other Related Info.			





AIUB DSpace Publication Details

Abstract

A range of conditions which affect heart is called heart diseases or “cardiovascular diseases”. This disease can bring out heart attack, chest pain, stroke etc. By reviewing some research paper related to heart disease prediction it was identified that most of the paper using singular algorithm to predict the disease using machine learning algorithm. Some of them indicates that they can’t use optimization techniques to improve their model performance. For these results, they have faced some problem to predict heart disease in an efficient manner by using their proposed system. To overcome these problems and for getting more accurate results in this medical study is very crucial that’s why four different classification algorithms were implemented to predict heart disease and find out the effectiveness of these algorithms. In this study Principal Component Analysis (PCA) dimensionality reduction technique was applied which helped to get better results with the aim of better accuracy by using these algorithms since medical diagnosis is sensitive. For this approach data was collected from UCI repository which was found in Kaggle and it is named as “Heart Disease UCI”. It was observed that without Principal Component Analysis (PCA) Logistic Regression performed best to predict heart disease with Principal Component Analysis (PCA) k-Nearest Neighbors (KNN) achieved greater accuracy compared to other classification algorithms. By applying PCA it was identified that accuracy for other algorithms like Decision Tree and Naive Bayes also increased compared to originally.

