Heart Disease Prediction System using Multilayered Feed Forward Neural Network and Back Propagation Neural Network

Authors:
Aditya A. Shinde, Sharad N. Kale, Rahul M. Samant, Atharva S. Naik, Shubham A. Ghorpade

Abstract

In today's modern world heart disease is the most lethal one. Diagnosing patients appropriately on a timely basis is the most challenging task. The disease diagnosis is often made based on experience and knowledge of medical practitioners. Due to this, there are chances of unwanted biases, errors and it also takes longer time in the accurate diagnosis of the disease. Medical diagnosis systems play a fundamental role in medical practice and are used by medical practitioners for diagnosis and treatment of various diseases. The proposed system will use the multilayered feed forward neural network and back propagation neural network algorithms for the prediction of heart disease in four stages. The dataset provided by the University of California, Irvine [UCI] machine learning repository is used for training and testing. The dataset consists of 14 attributes of 303 patients including its class label [1]. The accuracy obtained using this approach is 92%.

References
7. Jesmin Nahar, Tasadduq Imam, Kevin S. Tickle, Yi-Ping Phoebe Chen. 2013. Computational Intelligence for Heart Disease Diagnosis. 0957-4174. 96-104.
10. Majid Ghonji Feshki, Omid Sujoodi Shijani. 2016. Improving the Heart Disease Diagnosis by Evolutionary Algorithm of PSO and Feed Forward Neural Network. 978-1-5090-2169-7/16/$31.00. 48-53.

Index Terms
Computer Science
Artificial Intelligence

Keywords
Heart Disease Prediction, Neural Network, Artificial Intelligence.