A Survey on Prediction of Health Diseases Using Classification Techniques

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ABSTRACT: Technology in medical sciences has led to the development of huge number of hospitals and health care centers. Data-mining algorithms are utilized for analyzing and extracting data in various areas and to obtain meaningful data from it, that is raw data into useful information. Classification is a prominent data mining techniques which add same set of labels into a class. This paper summarizes Decision tree, artificial neural networks, association classification, K-Nearest Neighbors and genetic algorithms and also identifies different approaches associated with the implementation of data mining for diagnosing various health problems. These algorithms help in diagnosing and predicting the diseases like heart diseases, liver diseases, and cancer.

KEYWORDS: Classification, ANN, Hybrid DT, KNN, KEEL tool, Decision Tree, Bayesian Classification, SVM , Fuzzy-Genetic Algorithm, WK-ELM

I. INTRODUCTION

Data mining play a key role in knowledge discovery to obtain essential information [1]. It is the process of detecting and extracting hidden information, patterns and specific data connections with certain predictions. The techniques are classified as supervised and unsupervised learning. Supervised learning relies on labeled data in the training data set.

Unsupervised learning refers to organizing the information on non labeled data in the form of clusters. There are certain algorithms in the learning methods as shown in the figure1.

Data mining is the area of research for identifying meaningful information from large datasets of health organizations. Classification techniques are used to examine different diseases on certain factors like food production, purity of water, agriculture factors, stress environment as shown the following figure.
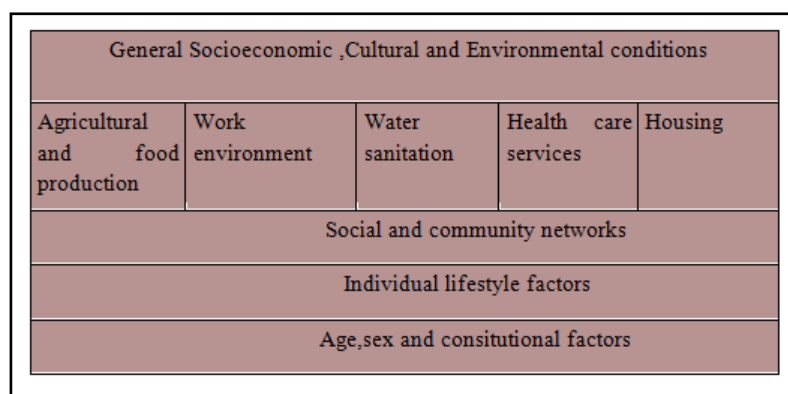

Fig. 1. Classification applications

This paper illustrates the summary of different techniques and tools in classification. The paper is arranged as follows: Section2 illustrates related work and section3 is conclusion.