**ABSTRACT**

The area of medical science has attracted great attention from researchers. Several causes for human early mortality have been identified by a decent number of investigators. The related literature has confirmed that diseases are caused by different reasons and one such cause is heartbased sicknesses. Many researchers proposed idiosyncratic methods to preserve human life and help health care experts to recognize, prevent and manage heart disease. Some of the convenient methodologies facilitate the expert's de cision but every successful scheme has its own restrictions. The proposed

approach robustly analyze an act of Hidden Markov Model (HMM), Artificial Neural Network (ANN), Support Vector Machine (SVM), and Decision Tree J48 along with the two different feature selection methods such as Correlation Based Feature Selection (CFS) and Gain Ratio. The Gain Ratio accompanies the Ranker method over a different group of statistics. After analyzing the procedure the intended method smartly builds Naive Bayes processing that utilizes the operation of two most appropriate processes with suitable layered design. Initially, the intention is to select the most appropriate method and analyzing the act of available schemes executed with different features for examining the statistics.