**ABSTRACT**

Sedentary lifestyle, poor diet and work pressure leadthe diabetes disease which may cause several fatal health issues like heart attack, strokes, kidney failure, nerve damage etc. Diabetes can be effectively managed when caught early with high accuracy. Machine Learning (ML) approaches are very effective to early detection and prediction of diabetes. The goal of this paper is to offer the inclusive examination of the diagnosis of diabetes by supervised and unsupervised ML algorithms. This survey includes papers on the diagnosis of diabetes from 2018-2020. Decision tree based algorithm such as C4.5, AdaBoost, XGBoost, etc., have predicted the diabetes with high accuracy. Unsupervised learning techniques such as PCA and K-Mean are

also useful in the attribute selection and outlier detection from the large dataset. This study reveals that K-Mean and SVM have also diagnosed and evaluated diabetes by high accuracy as an amalgamation of supervised and unsupervised machine learning techniques.