**Abstract**

Data mining is the extraction of hidden predictive information from large databases and also a powerful new technology with great potential to analyze important information in their data warehouses. Privacy preserving data mining is a latest research area in the field of data mining which generally deals with the side effects of the data mining techniques. Privacy is defined as “protecting individual’s information”. Protection of privacy has become an important issue in data mining research. Sensitive outlier protection is novel research in the data mining research field. Clustering is a division of data into groups of similar objects. One of the main tasks in data mining research is Outlier Detection. In data mining, clustering algorithms are used for detecting the outliers efficiently. In this paper we have used four clustering algorithms to detect outliers and also proposed a new privacy technique GAUSSIAN PERTURBATION RANDOM METHOD to protect the sensitive outliers in health data sets.