

ABSTRACT

Anomaly data is a data that have different characteristic from common of data. This data rarely happen in the dataset. Anomaly detection is approach detect this data and widely used in the real world today such as fraud detection, data cleaning and so on.

In this research, anomaly detection is used with clustering method approach which is grouping data based on the characteristic of data. This clustering based on data density to detect anomaly data. There is some problem with this approach such low and high dimension, data size in clustering, data shape and different densities in different cluster. This anomaly detection using shared nearest neighbors density algorithm as base algorithm which have a characteristic to solve problem mention above.

Basic of this clustering approach is grouping data with their nearest neighbors. With this concept, the algorithm suitable for low and high dimensional data. With this nearest neighbors then is transformed to the shared nearest neighbors. A strong link between two object is representated with number of neighbor which is shared between two of object. This link is used to group data with different densities on different cluster because this approach substitute a distance measure between two object with this representative link. With radius then resulting density value for each object. This radius determine is an object core point, border point or anomaly point. An anomaly object is an object which have low density comparing with common object.

Keyword : *Anomaly Detection, Shared Nearest Neighbors Density Algorithm*