

Abstract

Data mining is an automatic process to find useful information from large data collection. Outlier is a pattern which rarely appears in a dataset. Mostly, data mining tasks emphasize on searching frequent patterns and overriding outliers. Behind its abnormality, sometimes outliers have very useful information. Outliers play an important role in fraud detection, network monitoring and intrusion detection applications.

This Final Project has implemented one of the outlier detection methods called local sparsity coefficient (LSC). This method is developed from Local Sparsity Coefficient (LOF). LSC is a method that uses high density regions as the framework.

LSC is tested by datasets that have various distributions, dimensions, and numbers of records. Testing and analysis results indicate that LSC provides high accuracy in detecting outliers with fast processing time.

Keywords: outlier, LSC, density, accuracy, process time