

A study on classification learning algorithms to predict crime status.

Abstract

In the recent past, there has been a huge increase in the crime rate, hence the significance of task to predict, prevent or solve the crimes. In this paper, we conducted an experiment to obtain better supervised classification learning algorithms to predict crime status by using two different feature selection methods tested on real dataset. Comparisons in terms of Area Under Curve (AUC), that Naïve Bayesian (0.898), k-Nearest Neighbor (k-NN) (0.895) and Neural Networks (MultilayerPerceptron) (0.892) are better classifiers against Decision Tree (J48) (0.727), and Support Vector Machine (SVM) (0.678). Furthermore, the performance of mining results is improved by using Chi-square feature selection technique.

Keyword: Classification; AUC; Naive bayesian; Neural networks; k-nearest neighbor; Decision tree; Support vector machine; Chi-square.