

An Intelligent Analysis to Detect and Predict Crime Using Data Mining

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Abstract

This research paper is targeted to automatically detect patterns of crime. In the present scenario, the criminals are becoming technologically sophisticated in committing crimes. If automated, data-driven tools for crime pattern detection are made available to assist analysts, these tools could help police and other law enforcement agencies to better understand patterns of crime, leading to more precise attribution of past crimes, and the apprehension of suspects. Data mining can be used to model crime detection problems, detect unusual patterns, terrorist activities and fraudulent behaviour. Crimes are a social nuisance and cost our society dearly in several ways. Any research that can help in solving crimes faster will pay for itself. About 10% of the criminals commit about 50% of the crimes. Here we look at use of clustering algorithm for a data mining approach to help detect the crimes patterns and speed up the process of solving crime. We will look at k-means clustering with some enhancements to aid in the process of identification of crime patterns. We also use semi-supervised learning technique here for knowledge discovery from the crime records and to help increase the predictive accuracy. All of these techniques can be used to detect suspicious activities and prevent human lives.

Keywords: Crime-patterns, clustering, data mining, k-means, semi-supervised learning, counter-terrorism,