

# THE USE OF DATA MINING TECHNIQUES FOR CRIME DETECTION AND PREVENTION

**Ana (Resulaj)Ktona<sup>1</sup>, Olta Petriti<sup>2</sup>**

<sup>1</sup>Informatics Department, Faculty of Natural Sciences, University of Tirana, Albania  
E-mail:

<sup>2</sup>Informatics Department, Faculty of Natural Sciences, University of Tirana, Albania

## **Abstract**

The registration of data about crimes, given the large number of needed attributes, generates a very large volume of data. As a result, the analysis of these data by means of traditional methods is very difficult. We believe that the use of data mining methods would bring ease of data analysis and as a result will assist in detection of the possibility to commit crime and in preventing it. Data mining it is known as the process of detecting hidden patterns and relationships in data recorded in a computer. It also allows us to make accurate and reliable forecasts of future events, based on the identification and characterization of these models on historical data. The main use of data mining is to reveal information that no one knew before. In this paper we will study methods of data mining that can be used for analyzing the recorded data about the crimes committed. We will identify the most appropriate data mining method to analyze the data collected from sources specialized in crime prevention by comparing theoretically and practically data mining methods. The data that will be analyzed are data related to the area where crime occurs and people(s) who commit this crime. Some features of these data are: age, gender, employment status, person(s) with whom they live, the time of occurrence of the crime, type of crime, crime place, etc. Methods will be applied on these data to determine their effectiveness in detecting and preventing crime. We expect that the methods of data mining will contribute in identifying the characteristics of areas where crimes occur, as well as the characteristics of persons who commit specific crimes. In this way these methods will contribute to the predictions on the possibility of occurrence of the crime and as a result in its prevention.