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Crime Data Analysis Using Data Mining

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Project Abstract

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ABSTRACT

Data Mining is the procedure which includes evaluating and examining large pre-existing databases in order to generate new information which may be essential to the organization. The extraction of new information is predicted using the existing datasets. Many approaches for analysis and prediction in data mining had been performed. But many few efforts has made in the criminology field. Many few have taken efforts for comparing the information all these approaches produce. The police stations and other similar criminal justice agencies hold many large databases of information which can be used to predict or analyse the criminal movements and criminal activity involvement in the society. The criminals can also be predicted based on the crime data. Crime analysis and prevention is a systematic approach for identifying and analysing patterns and trends in crime.

Our system AIR Crime Analyzer is a Crime Data Analysis Project using Data Mining Technics. Crime analyses is one among the important application of knowledge mining. Crime Analyzer is a law enforcement function that involves systematic analysis for identifying and analysing patterns and trends in crime and disorder. Our system can predict regions which have high probability for crime occurrence and can visualize crime prone areas. With the increasing advent of computerized systems, crime data analysts can help the Law enforcement officers to speed up the process of solving crimes.

The main aim of this work is to perform an analytical operation on the supervised learning and unsupervised learning techniques that has been applied towards criminal identification. This paper presents the data analysis on the Crime analysis and crime prediction using several Data Mining techniques. Using the concept of data mining we can extract previously unknown, useful information from an unstructured data. Here we have an approach between computer science and criminal justice to develop a data mining procedure that can help solve crimes faster. Instead of focusing on causes of crime occurrence like criminal background of offender, political enmity etc we are focusing mainly on crime factors of each day. For the data analysis we are considering factors like the types of crime committed in an area, the intensity of different crimes and rank them from high to low intensity. We are identifying the areas which are more crime prone than others, also the time of the day, day of the week and months during which it is most likely to occur.

Data processing contains many tasks and techniques including Classification, Association, Clustering, Prediction each of them has its own importance and applications It can help the analysts to spot crimes faster and help to form faster decisions. The main objective of crime analysis is to seek out the meaningful information from great deal of knowledge and disseminates this information to officers and investigators within the field to help in their efforts to apprehend criminals and suppress criminal activity. In this project, K-means Clustering is employed for crime data analysis.