Abstract

Pattern detection is one of the essential challenges in crime mapping and analysis. Data mining can be used to explore crime detection problems. A cluster technique is an effective method for determining areas with high concentrations of localized events. Conversely, it remains a particularly demanding task to detect hotspots with mapping methods in view of the vulnerability connected with the suitable number of groups to create and additionally securing significance of individual clusters identified. Fuzzy clustering means algorithm was used for identifying hotspots of Chicago police department's citizen law enforcement analysis and reporting system data. In fuzzy clustering, a membership value to each data is assigned, which indicate the strength of relationship between that data points and a specific cluster. In this study each cluster represented the group of global positioning system data points having latitude and longitude as their co-ordinates. The findings from this study were expected to aware the public about crime hotspots. Law enforcement agencies can take prior steps to prevent crime with the use of detected crime hotspots.
Analyzing and Displaying of Crime Hotspots using Fuzzy Mapping Method


Index Terms

Computer Science

Fuzzy Systems

Keywords

Hotspots crime hotspots fuzzy clustering mean cluster analysis pattern recognition
point pattern analysis.