NOVATEUR PUBLICATIONS
INTERNATIONAL JOURNAL OF INNOVATIONS IN ENGINEERING RESEARCH AND TECHNOLOGY [IJIERT]
ISSN: 2394-3696
VOLUME 7, ISSUE 5, May-2020

AN OVERVIEW OF A CRIME DETECTION SYSTEM USING THE ART OF DATA MINING

SRITHA ZITH DEY BABU
Chittagong Independent University, Chittagong, Bangladesh

DIGVIJAY PANDEY
Department of Technical Education, Kanpur, India

ISMAIL SHEIK
Management College of Southern Africa, Durban, South Africa

ABSTRACT

To predict crime and analyze crime activity we need to proceed with a systematic approach with data mining. By using a data mining system one can predict locations that have a huge probability. And one also can inward eye by using this method. It will increase the computerized systems. Our main problem is that we are looking at the crime occurrences but not at the key factors of crime. If we use data mining we can form any unstructured data to structured data. By which we can find also some prediction before the crime. We can set a bridge between computer science and criminal justice board using the data mining process by which we can catch the factor very fast and also very easy. Culprits also are divided based on their data. Crime and illegal services are increasing rapidly now. We suggest a methodology by which we can detect culprits, predict crime by analyzing previous crime reports of the regions. For establishing this we need crime data from police station websites, govt. crime websites etc. Using the Naïve Bayesian algorithm on these pre-processed data we can easily predict the stat of crimes. With this system we can establish a secure society which will free from crime and people can lead their life soundly and also happily. So that we need this data mining system and it will increase the usage of computer science and engineering in this era of science. We propose to the prediction of real-time. Though it will difficult to get accurate cause crimes are doing their crimes using different and complex methods. They are also clever. But the bridge of data between the police station and system of data mining will report about further and upcoming crimes. And for easy understanding of the police government we need to use graph data mining so that they will easily get points. This paper will describe kinds of criminal activities and criminal pathway methods after a crime which we will solve by using the data mining system. SO, we need to locate the maximum crime location area first. We can also detect the hotspot area and will get some data also from social sites. Data analysts of crime can help the law department to solve this problem. The Law department can also reduce crime hotspots. Using this method we need to extract previous criminal data. So, the bridge between computer science and the law will help the world to free from crime.

KEYWORDS: Data mining, Crime info, Detection, Present plan, Naïve formula

INTRODUCTION

Data mining is the key factor that can evaluate and process large previously known data in case of generating information that can be vital to an organization. Data mining is such a method which can invent graph in a large number of data sets including method of ML, stat and database. Data mining is an approach that formats large data sets and can find the results for further use of analyzation. Data mining increases the bridge length of crime and justice using its system. By using a data system we can track criminals in a faster way. We can predict the hotspots using data mining by which the criminal will get caught before doing any crime. In this paper we are taking an interdisciplinary way between computer science and criminal justice to develop a data mining pattern. After developing the pattern we can reduce crime faster. We can also predict criminals by using data mining. In this paper we are presenting the survey about crime patterns, crime prediction using this system. The fraud detection method can also be made using these data mining systems. We often see some frauds in the telecom industry. So that we can get rid of this using data mining. In this

paper, we want to grow researchers to use data mining, not only the detection process but also the image processing system, chatbot system, question weight computing system, fuzzy computing system, etc.

CRIME INFORMATION

Crime analysis is a very strategical and confidential term for both police and detectives. Historically, we detect criminals by finding any clue of crime is. Because we all know that criminals have released some crime signs while doing the crimes. So it is very easy for the police or detectives to find the criminals if the criminals make crimes in this way by releasing some signs of crimes. Otherwise, we can get information from the local peoples of the crime area. So, for the data mining process we need to know a criminal's previous crime methods, crime locations, crime types. After collecting all this information we can get a prediction of crime.

PRESENT SYSTEM

Present systems are a query-based learning approach for predicting the criminals' next step. This system is using criminals' previous crimes approach method for understanding the types of criminals and use javascript for user-level searching. Though it has a pattern of some unique keywords and these ready it faster to find a huge number of crimes. And in a faster way. This system uses SQL injections. That is a query-based method that can detect SQL attacks or other website attacks. By which is a search based method that can detect SQL attacks. This can detect other web attacks roo. At the time of the attack the SQL injections will create an alarm for alerting.

DOWNSIDES

a) Crimes can vary on the country wise
b) Criminals also may take suicidal steps
c) Data can be lost
d) Data may be not 100% pure
e) Criminals can move to another country

METHODOLOGY

Here we are showing a figure of methodology:

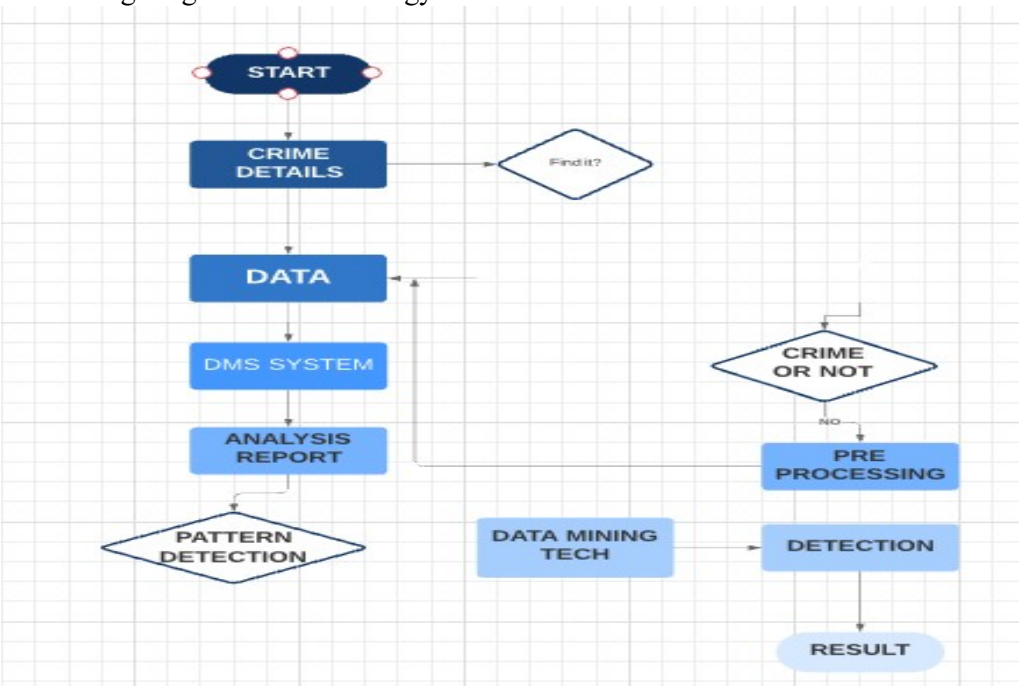


Figure 1: Criminal detection

CRIME PATTERN-DATA MINING

We will convert crime reports to data mining. It can make help to the polices and detectives in solving crimes quickly. By cluster method we can define every hotspot into different crime patterns. So that we can make our detection faster or the polices.so, we need to detect cluster and we will cluster to correspondence cluster too. Though clustering algorithms are similar to records which are also similar between themselves. But various from the rest data. These data will be presented to the polices or detectives to detect.

CRIME PREDICTION

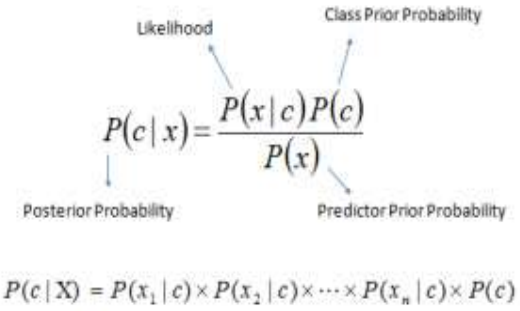
Another term of our study is to predict crime in a specific area and also at a certain time. The Bayesian classifier makes us enabled to reach our study goal. For predicting a crime we need four types of features. Such as:

I. Crime month
II. Crime day of the week
III. The real crime time
IV. The real crime location

.

All the data can be formed as a normal set.

NAÏVE FORMULA:



(Vidhya, 2013)

Figure 2 : formula

ANALYSIS

So, finally after analyzing all these things we reached our main goal which can be an impact for any country about crime detection. We want to make a further connection between three sources. Such as:

- ✓ Data mining
- ✓ Law
- ✓ Neighborhood

We analyzed that crimes vary with criminal's age and health or political power also. So, we need to analyze these things deeply. Though we didn't find any distribution between crime hotspot and people race connection.

CONCLUSIONS

For our further algorithm or system we can use this paper as a base of data mining of crime detection and can enrich our overall goal of setting up a data society. The data ming system will also help people to make a direct connection with police and the law of justice officials. So that people can easily say their problems and we can easily predict crime

REFERENCES

1. Vidhya, A. (2013, 5 4). 6 Easy Steps to Learn Naive Bayes Algorithm with codes in Python and R. Retrieved 3 2, 2020, from www.analyticsvidhya.com: https://www.analyticsvidhya.com/blog/ 2017/09/ naive-bayes-explaine
2. Bergstra, James, and Yoshua Bengio.(2015) "Random search for optimization." Journal of Machine Learning Research13-281-305.
3. Akoglu, Leman, and Christos Faloutsos. (2015) "Anomaly, event, and fraud detection in large network datasets." Proceedings of the sixth ACM international
4. Noor, n.m.m, retnowardhani a, m.l. abd, saman mmy "crime forecasting using arima model and fuzzy alpha-cut," journal of applied sciences, 2013, 13:167-172.
5. Phillips, p. And i. Lee, "mining co-distribution patterns for large crime datasets," expert system with applications 2012 39:11556-11563.
6. zhou, f., b. Yang, l. Li and z. Chen "overview of the new types of intelligent decision support system," international conference on innovative computing information and control IEEE 2008 267-272.