

# Detecting Criminal Method using Data Mining

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**Abstract:** Community is love in many ways. Any research that helps payment should be done quickly at the crimes. About 10% Criminals make up 50% offenses. Here we are see clustering algorithm for data processing Approach to find ways to criminals and help to get quicker criminal act We'll see k-algorithm cluster with some improvements in the process identify crime based forms. We used it tactics for genuine crime data from the sheriff's office checking our results. We use semi-supervision the technology to learn here for knowledge search helps to increase crime records and computation accuracy. We have created a weight plan attributes here to deal with different limits box clustering tools and techniques. It's easy geographical implementation of data processing structure crime helps to improve conspiracy and production detectives and other law enforcement officers. It can also be used against domestic terrorism Security

**Keywords:** crimes; cluster; geographical; security; detection

## 1. INTRODUCTION

Historical judgments are historically unique criminal justice and law enforcement experts. With the increase monitoring of computed computers crimes, computer data started to help researchers law enforcement officials and detectives expedited the act of solving crime. Here we will take an interdisciplinary the approach between computer science and the criminal justice should create a data mining precedent we can help you solve crimes quickly. And more specifically, we are use clustered-based models to help identify criminal forms we will discuss some sermons used in the criminals justice and police fields and compare and contrast they are related to data mining systems. Refers to suspicion a person believed to be guilty. The suspect can not be identified or identified. Suspect until proven guilty, not a criminal. The person who suffered whoever targets crime. Most of the time suffered identifying and informing the person on most occasions crime. In addition, there may be some witnesses of crime [1].

There are other terms, usually axons it refers to killing or killing a man. Within there may be sections like torture, Senior officers, murder and murder of law enforcement authorities. For our modeling purposes, we will not we must go to the deepest level of criminal justice prevents us for major crimes. Cluster(crime) has a special meaning and refers to one geographical crime, i.e. some of the crimes geographical zone. Such a cluster can be sight the crime represents using a globe-displacement conspiracy in the graph of the police jurisdiction. Thick the crime group is used to opt for a view 'Hot spots' offense. However, when we talk about the cluster from a data mining standpoint, we refer to a similar kind Interest in geography given such a cluster it helps to identify a crime or a crime character. Some well-known examples of criminal methods are DC Firing, a serial-rape or serial killer. These crimes may be can be done by single suspicion or by a group suspects. The number below shows the geo-location displacement plan Crime clusters.



## 2. CRIME AND REPORTING SYSTEM

The data for crime is often impressive in the confusion. When some information is kept secret, some are general information. Information about prisoners it can often be viewed at the district or sheriff sites. However, Information on crimes related to drugs or criminal cases usually more limited. Similarly, information about sexual criminals are alert to

others part, but the victim's identity is often blocked. The as a data mining, the inspector must deal with all of this public data and personal data issues are data mining the modeling process does not violate this law borders. Most sheriff's office and police departments are used electronic systems for criminal reporting instead traditional paper based crime reports.

This is the crime the following types of information are available for information:

- The crime type, date / time, location, etc.
- The suspect's information (identity or Unidentified),
- victim and witness.

In addition, there crime and modus story or interpretation usually running in text form (MO). Police Officers or detectives use free text to record most of them Insights that are not included in the test box pre-determined questions. The first two sections the information is usually stored on the computer databases number, character or date table fields lastly, a free text is often saved. The data mining crime is becoming increasingly challenging from the free text field. When you can give free text fields magazine columnist, a great story line, will change them data mining attributes are not always an easy job. We are let's see how to attain remarkable attributes data mining models.

### 3. DATAMINING AND CRIME PATTERNS

Let's see how to change the information about crime. A data mining problem [2], that it can help The detectives we found inside the cracks quickly solved a clerk of crime is a group of a crime geographic zone or crime is a hot place. Whereas, data mining term is a cluster of similar data points - a possible crime method. That is appropriate clusters or a subset of the cluster should have a must letter to criminal forms. There are clustering algorithms in the data mining those recordings are identical to the identification task of groups they differ from themselves but from others data. Some of these clusters are useful in our case to find one or only one criminal action a group of suspects. This information is the next one the challenge is to find the best providing variables gallery. These clusters will be provided later the detectives chase the expertise of their domain.

The automatically detects and allows criminal procedures detectives focus on the first guerilla qualities and make a solution these crimes are the complete "laughs" or the decision to solve in some cases, if the incidents are suspected a mob can create from full source bits of bits of information from each of the offenses are bits Incidents. For example, a crime site reveals the suspicion black hair reveals that the next incident / witness the suspect reveals that the person is middle age and the third is a green the left hand will give it all together more complete no more than one film alone. Without doubt criminal method, detective is less likely to develop complete image from bits of different information crime incidents.

Most of today are made manually the reports indicate that with the help of a duplicate multi-sheet usually from computer data researchers and their own crime records. We choose to use any cluster technique because crimes, such as the supervision technique of classification There are often widespread and criminal databases many unsolved crimes. So, classification The technique will be dependent on that and will be resolved crimes do not bring good forecasts for the future offenses. The nature of the crimes that vary over time internet-based cyber crimes or cell phones are crimes used it is unusual for a long time ago. Thus, it should be In the future you can find new and unknown forms, clustering techniques work better.

### 4. CLUSTERING TECHNIQUES USED

We will see some of our contributions in this section inspection. here's a simple clustering example. Let's take a very simple case of crime record. A statement based on crime data analyst or detective This data is sorted in different rows, usually the first type Basically the most important characteristic is detective experience.

Crime type	Suspect	Suspect sex	Suspect age	Victim age group	Weapon
Robbery	B	MALE	MIDDLE	ELDERLY	KNIEF
Robbery	W	MALE	YOUNG	MIDDLY	BAT
Robbery	B	MALE	YOUNG	ELDERLY	KNIEF
Robbery	B	FEMALE	MIDDLE	MIDDLE	PISTON

We see Table 1 as a simple example of the crime list. The offense is crime and it will be very much important attribute. rows 1 and 3 show a simple crime The method where the doubt is matched and affected The profile also resembles. The goal here is that we can use data the mine that finds the most complex forms from the mine there are many factors in life or crime and many other factors there are some information about the crime.

A General case It is not easy for a computer data analyst or detective can identify these types with a simple query. Thus using the data mining comes bunch technique It's easy to handle large-scale data and handling loud or missing information about criminal cases. We're using k-means clustering technique here the most widely used data mining cluster technology. Next, the most important part was to prepare the data this analysis.

The actual crime data is derived from a Sheriff's office, under unrecognized agreements crime reporting system. functional data modify data with extraction change. Later, some checks were directed to view quality of data, such as missing information, borders and more blank, unknown or contractions for the same word this applies to older people who have not yet seen everyone. If the these are not marked as a value, creating clustering these are multiple groups of the same logical value. Next the task was to identify significant characteristics gallery.

This process speaks to the domain criminals, criminal investigators, and experts analysts and on the other hand the characteristic importance the algorithm for the classical character set for the protocol types of crime we see this tool or expert based paradigm to solve the problem. Different attributes are based on criminality It is important to be aged It is important for the massacre, not to loot the robbery It's important not to worry about the pregnancy age owner of the house. Take care of different attributes differently we introduced the concept of crimes that we weigh attributes. This allows for different weights various attributes are based on the changing types of crime cluster. This allows weight unlike numerical traits, classified attributes They can easily weigh them. Using integrated weights may have attributed attributes reflected programs that were designed to increase performance weight of that variable or feature. We have not seen use cluster weight in other places in literature all attributes, such as review, normalization, are considered equal clustering algorithm significance.

However, we are this lightweight technique is introduced here in our light semi-supervision or professional-based method. basically With our weighted clustering attributes, we clustered databases blame the methods and then present the results domain expert with detective or statistics important attributes. Detective groups, first see small clusters Then offers expert recommendations. This is the performance the process helps to determine the characteristic characteristics weights for different crime categories. Based on this information from domain expert, i.e. detective, future crime methods can be detected. First futures or unresolved crimes are based on significant attributes and consequently detective individuals inspection.

This is because the cluster exercise, the groups hundreds of crimes can be either small groups or related crimes, it makes the detective work much easier find the methods of crime. The other approach is to use a small set of new offenses using the data and the tracers to score it against the existing clusters or known crime incidents injected into a new data set then compare the new clusters related to the treasury. The process of using the trackers is similar to the application find out that there are no radioactive trucks It's hard to find.



Pattern 1 (129 crimes)	Pattern 2 (79 crimes)	Pattern 3 (29 crimes)
Suspects point of entry	Suspects point of entry	Suspects point of entry
Victims Race	Victims Race	Suspects count (number)
Suspects count (number)	Number of days old	Victims Race
Number of days old		Number of days old

Pattern 5 (50 crimes)	Pattern 6 (9 crimes)	Pattern 7 (13 crimes)
Suspects race	Suspects city	Suspects Sex
Suspects Average height	Suspects point of entry	Suspects point of entry
Suspects Average Weight	Suspects Average Age	Suspects city
Suspects Average Age	Suspects count (number)	Suspects Average height
Suspects point of entry	Number of days old	Suspects Average Weight

Figure 2 Plot of crime clusters with legend for significant attributes for that crime pattern

## 5. RESULTS AND CRIME PATTERN

The proposed system is used in conjunction with globally plot. The crime analyst can choose the time and the one or some kind of crime and kind of geography show the resulting map. From this set, the user may be select the entire set or interest circle. The resulting data set is data source of data mining processing. These are based on records pre-determined attributes are weighed. The as a result, clusters have potential criminal forms. The as a result, clusters are planned in a global-wide conspiracy.

We would show results in the picture above. Other clusters or crime shapes are color-coded. Each the group provides the total number of mythological crimes these include events that are included with significant ones attributes to heal characteristics. This information be careful when looking for a deduction experiment predictable crime clusters. We've reviewed our results for the criminalized forms found by holding court demonstrations on these crime cases whether the allegations against suspects were accepted or not rejected. So starting point is crime event data (some of these crimes were already in court abuse / system) measured by significant attributes or features or crime variables such as crime statistics,

The suspect is the victim the court ruling was used in the cluster process. Then, we clustered offenses on our basis the weighing technique should come with crime groups (Clusters in the data mining term) possible criminal methods of crime. Geo-Spatial Significantly, the conspiracy of these criminal forms The attributes of measuring these groups are provided detectives with easy task to identify now the crime is more than a list of hundreds of crimes non-contact orders or events in some predetermined categories order. In our case, we have seen criminal forms below is shown in the same colors and saw in court checks to check some of the data mining fluids or there were allegations of similar criminals.

## 6. CONCLUSIONS AND FUTURE DIRECTION

We saw the use of data mining for identification crime system is a crime system techniques. Our contribution here was to blame Finding the model as a machine learning task and through it using data mining in solving police detectives Offenses. We identified remarkable attributes; Using professional based semi-monitoring learning method and developed a considerable amount of planning attributes. Our modeling technique was able to identify crimes will create a large number of crimes criminal detectives work easier. Some of our disadvantages are blame the method analysis can only help detective, not replace they.

Further data mining data is sensitive to input quality it may be wrong, the information may have been lost and may be data entry error is incorrect. The actual data will be mapped to data mining properties are not always an easy task effective data mining and crime data inspector is required good field knowledge.

They have to work closely a detective in the early stages. We will create the future expansion of this study models for measuring hot spots [3] to assist crime In most of the crimes involving police involvement allows you to be more useful for any particular window using police resources we plan to see developing social networks to connect criminals, investigate suspects, gangs and their relationships. There is more capacity to search for suspicious explanations regional, FBI databases [4], for traffic violation databases helping detecting crime from different states or more specifically facing the terrarium operations add value to this crime detection precedent.

## 7. References

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