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# Criminal Spot Detection

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**Abstract:** *The purpose of this research is to develop an application that can provide up to-date information about the security level of a certain place that can be estimated by application users by viewing vulnerability information, developing applications that can facilitate application users in disseminating information about certain place security points, and developing applications that can make it easy for people closest to get the latest information in the form of location of the users and can shorten the steps needed to provide information to the relatives if they feel unsafe.*

*The benefit of this research is that the closest people can take action as quickly as possible when the user of the application is in a state of danger, increasing the security and quiet of the users of the application because of its location can be monitored by its relatives, and increase the knowledge of its users about the places around it which will increase his self awareness. Suppose particular person saw that the crime is happening then the person can take photograph of it and upload it on our application. So, because of it police can find the location of that person where the crime is happening. Based on such information police can be able to reach to that location and they are able to take some actions against it. Also we are using panic mode in it which shares the location of crime spot to police and admin. Also it gives emergency auto dialing feature.*

**Keywords:** *Violence, Tackle Crime, Data Mining, Apriori Algorithm Geo-fencing.*

## I. INTRODUCTION

There are various ways to solve the problem of violence but until now no one can stop the action completely. The non-completion of this issue requires that every individual, especially women, should increase their self-awareness so by observing all these things we are going to develop one application. Basically, our application is used to give information for road users who will pass through unfamiliar areas. It would be good if before travelling, users can find information about the security of the area to be passed. It also gives the information to the user about the events that have been occurred in a particular environment. It sends a voice notification to the user that you are entering into the dangerous zone. So basically, our application makes it easy for people to get the latest information in the form of location of the user.

This information is sent to their relatives if they feel unsafe. The benefit of our application is that the closest people can take action as quickly as possible when the user of the application is in a state of danger. We also provide a crime reporting feature in which, suppose the particular person saw that the crime is happening then that person can take the photograph of it and upload it on our application so because of it police can find out the location of that person where the crime is happening based on such information police can reach to that location and they are able to take some action against it.

## II. PROBLEM STATEMENT

Crime in the street is a very serious problem and has become a great concern for the government. Every year the crime rate is increasing. One of the methods to reduce it is by increasing community awareness and increasing response time of crime detection. It is difficult to find information about the area skipped when you want to travel because one of the factors is lack of public awareness, especially for road users who will pass through unfamiliar areas. It would be good if before traveling, users can find information about the security of the area to be passed.

## III. LITERATURE REVIEW

- A. Author Xiang Zhang has proposed Detecting and Mapping Crime Hot Spots Based on Improved Attribute Oriented Induce Clustering. Crime mapping is a very effective method for detecting high-crime-density areas known as hot spots. A crime hot spot is an area where the number of criminal or disorder events is larger than that in any other places, or an area where people have a higher risk of victimization. There are many theories and methods in common use by far. They explain different types of crime phenomena that occur at different geographic levels. The method which is used most widely for detecting crime hot spots is the spatial clustering in the original crime data.
- B. Authors Shahid Karim, Asif Ali Laghari have proposed Image Processing Based Proposed Drone for Detecting and Controlling Street Crimes. Drone technology is being used for military, agriculture, aerial photography, surveillance, remote sensing and

many more purposes. In this paper, drone plane is proposed for monitoring and targeting the street crime criminals based on real time image processing techniques. Operations of proposed plane controlled with two processing units, 1st processing unit is for implementation of real time image processing techniques and 2nd processing unit will handle the rest of controlling, monitoring and targeting operations. Drone plane will monitor circular area of 5 kilometers and it will automatically perform all operations and can be controlled by operator. Shape detection algorithms have been tested to find accuracy in target detection and analysis the processing time before implementing in such environment and results provide optimal accuracy in matching weapons type with name and shape in predefined database.

- C. Authors Oyekanmi A Framework for Tracking Criminals Using Image-Based Height Detection Techniques In recent times, the problem of terrorism has approached a global dimension. The operation of terrorists are indiscriminate. Hence, tracking them requires careful planning, preparation and cooperation among security operatives and nations. Since terrorists have sinister motives, they often hide their identities or use falsified identities. In order to forestall terrorist's attacks, intelligence and warning systems are put in place for detecting and preventing future attacks. In this study, we present a framework for tracking criminals using imaged- based height detection techniques. The framework involves four case studies of different postures. An algorithm was developed to capture the intrinsic parameters. The model developed was able to detect, both in the local as well as global, a person's height with no fore-knowledge of the zooming rate with which the picture was taken. Matlab R2009a was used as a programming tool in the implementation of the developed algorithm.

#### IV. METHODOLOGY

The algorithm in which every operation is uniquely defined is called deterministic algorithms. The algorithm in which every operation may not have unique result, rather there can be specified set of possibilities for every operation, such algorithms are called Non deterministic algorithms. Non deterministic means no particular rule is followed to make guess. The algorithms are classified into groups depending on their computing time.

- 1) *P Class*: This group consists of all algorithms whose computing times are polynomial time that is there computing time is bounded by polynomials of small degree. Eg. insertion sort, merge sort, quick sort have polynomial computing time.
- 2) *NP Class*: This group consists of all algorithms whose computing time are non- deterministic polynomial time. Eg. Traveling salesman problem The NP class problem can be classified into two groups: NP Hard Problems: Normally optimization problems are NP-Hard problems. All NP complete problems are NP hard but some NP hard are not NP complete. A problem is NP hard if and only if its at least as hard as NP complete problem.
- 3) *NP Complete Problems*: Normally decision problems are NP-Complete problems. Non deterministic polynomial time complete problems. Decision Problems: Any problem having the answer either zero or one is called decision problem. Explanation: Consider any decision problem, where for any given n number of inputs, decision oriented solution is available. Our system will deals with authentication which is decision problem based system and gives solution as valid or invalid, thus our Problem is NP-Complete.

##### A. Mathematical Model

Let S is the system to get voice notification on the criminal spots. S

= {I,O,F, DD,NDD,Success,Failure}

Where, I = Input

I = {Criminal Spots, no of times the crime occur at specific place, map, location} O

= Output

O = {Voice notification, view criminal spot, place recommendation}

F = {Register, Login, add location, view location, send notification, search location, view users} Success

– All processes executed successfully

Failure – problem in software

#### V. CONCLUSION

Thus we have concluded that, whether a place is a dangerous area or not through the information of an criminal spot the journey application that includes reports around the criminal spots to make them aware.



## VI. ACKNOWLEDGMENT

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