**Project Name:** WatchDog

**Introduction:**

CCTV(Closed-circuit Television) is a TV system in which signals are not publicly distributed but are monitored primarily for surveillance and security purposes. Closed-circuit television utilizes video cameras in surveillance of a particular area using a limited number of surveillance monitors. Almost all video cameras fit in the usage as the CCTV cameras, although the ones used must have high definition for accuracy in monitoring. But it is not enough to fight against crime because of failure to deter people from committing crimes in the first place. This proposal includes how we can use this CCTV more efficiently and solve this major problem to deter people from committing crimes in the first place.

**Statement of Problem:**

CCTV actually solve very few crimes, and their deterrent effect is minimal. Of course, because of technological limitations of cameras, organisational limitations of police and the adaptive abilities of criminals.

To some, it's comforting to imagine the person who is responsible for our security is monitoring every camera but the truth is very different. Most CCTV footages are never looked at until after a crime is committed. When it is examined, it's very common for the viewers not to identify the criminals. Lighting is often bad and images are grainy and criminals tend not to stare helpfully at the lens. Cameras break far too often. The best camera systems can still be thwarted by sunglasses or hats. Cameras only look in particular directions at particular locations. If criminals know this and can easily adapt by moving their crimes to some place not watched by a camera and there will always be such places.

There are many questions regarding effectiveness of CCTV.

1. **Less people for monitoring:** Less people are for monitoring and if we increase the number of people who will be monitoring the CCTV then it will increase the cost.
2. **Unable to detect crimes in real time:** Most of the time, we find the crime after it already happened so it can’t deter people from committing crimes in the first place.
3. **Finding an occurrence takes a lot of time:** After any crime happened and suppose the person who was there for monitoring was unavailable or any other things can happened then it will take too much time to find the culprit as we do not know the exact time of the crime.
4. **System can not detect a crime by itself:** CCTV system can not detect suspicious behaviors and if the person who is responsible for the monitoring is not there then it is too easy to commit a crime.
5. **Track a person manually:** If one wants to track a suspected person, he/she have to track it manually by checking a camera feed one after another.

**Existing Solution:**

To use the CCTV system more efficiently and to reduce the number of crimes, some actions can be taken immediately. The possible solutions are -

1. **More people for monitoring:** As most of the crimes committed because there are less people for monitoring, so we need to add more people for monitoring. It will help to reduce the number of crimes slightly.
2. **List down the suspicious events manually:** For any suspect behavior: The person who is monitoring the cameras will manually list down the things he/she finds out suspicious.
3. **More CCTV camera:** The large number of cameras needed to reduce the crime it means that CCTV system will cover the sites of a substantial proportion of recorded crimes.
4. **Regular maintenance:** The CCTV system needs to be maintained regularly.

**Plan of Action:**

The following solutions are the possible solutions which we can take as an action in future. These solutions are suggested for the system. It will help to deter people from committing crimes at first place. The plan of actions are -

1. **CCTV system can detect suspicious behaviors by itself:** The CCTV system can recognize any suspicious behaviors.
2. **Send notification for any crime in real time:** Whenever any suspicious thing or any crimes committed, it will automatically send the message to the person who is monitoring the CCTV.
3. **CCTV system can learn new crimes:** Users can set flag to an event as crime and cctv system can learn from that. It will send notification for this type of crime in future.
4. **Track a person automatically:** The user can select a person and system will track the person automatically.
5. **Categorized history:** The system will save the event in their respective categories.