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# Event Detection System Using CCTV

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**ABSTRACT:**Event detection is a cutting-edge problem in video image processing which is not that straight forward to solve. Hence, we perform a thorough search for state of the art in solving the issues in this area. There are many applications of event detection in this age of cybercrime. We target to propose a best solution to outperform existing research and make a positive development in it. We have discussed quite a long list of existing literature reviews in this hope that it would help us and anyone else working on the same as a guideline and one stop reading.

**KEYWORDS:**Machine-Learning, Open-CV,PyCharm IDE (Python ==3.8 ), Django == 3.2.1,Eclipse IDE Oracle Database (MySQL) ,HTML,CSS.

## I. INTRODUCTION

A common task in many machine learning application domains involves monitoring routinely collected data for 'interesting' events. This task is prevalent in surveillance, but also in tasks ranging from the analysis of scientific data to the monitoring of naturally occurring events, and from supervising industrial processes to observing human behavior. We will refer to this monitoring process with the purpose of identifying interesting occurrences, as event detection. We put together this special issue of the Machine Learning journal with the belief that principled machine learning approaches can and will be a differentiator in addressing event detection tasks, and that theoretical and practical advances of machine learning in this area have the potential to impact a wide range of important real-world applications such as security, public health and medicine, biology, environmental sciences, manufacturing, astrophysics, business, and economics.

## II. METHODOLOGY

We proposed an approach for temporal event detection using deep learning. The project Event Detection system will help us in many ways. It has Facilities such as their would be car trashed on the traffic signal it will give alert. Or anyone trying to disturb or harm the CCTV or their would be any killing seen in front of CCTV camera it would give the alert(by using beep sound in the system). In the recent past, domain experts in these areas have had the laborious job of manually examining the collected data for events of interest. With the emergence of computers, many efforts have been made to replace manual inspection with an automated process. Data, however, have become increasingly complex, and the quantities of collected data have become extremely large in recent years. Multivariate records, images, video footage, audio recordings, spatial and spatio-temporal data, text documents, and even relational data are now routinely collected. We all expect that advances in machine learning would be well-suited for this class of tasks.

## III. DESCRIPTION

Event detection is the process of analyzing event streams in order to discover sets of events matching patterns of events in an event context. The event patterns and the event contexts define event types. Event detection is a subfield of computer vision that analyzes input videos with the goal of determining when a particular anomalous event has occurred. Abnormal event detection is a rapid development task in video analysis, which is aimed to distinguish abnormal and normal events in surveillance videos. As the normal and abnormal events have some similarities, more discriminating methods or motion information need to be explored. Event detection falls under three main categories: threshold based, supervised and unsupervised.





Fig1.CCTV Detection

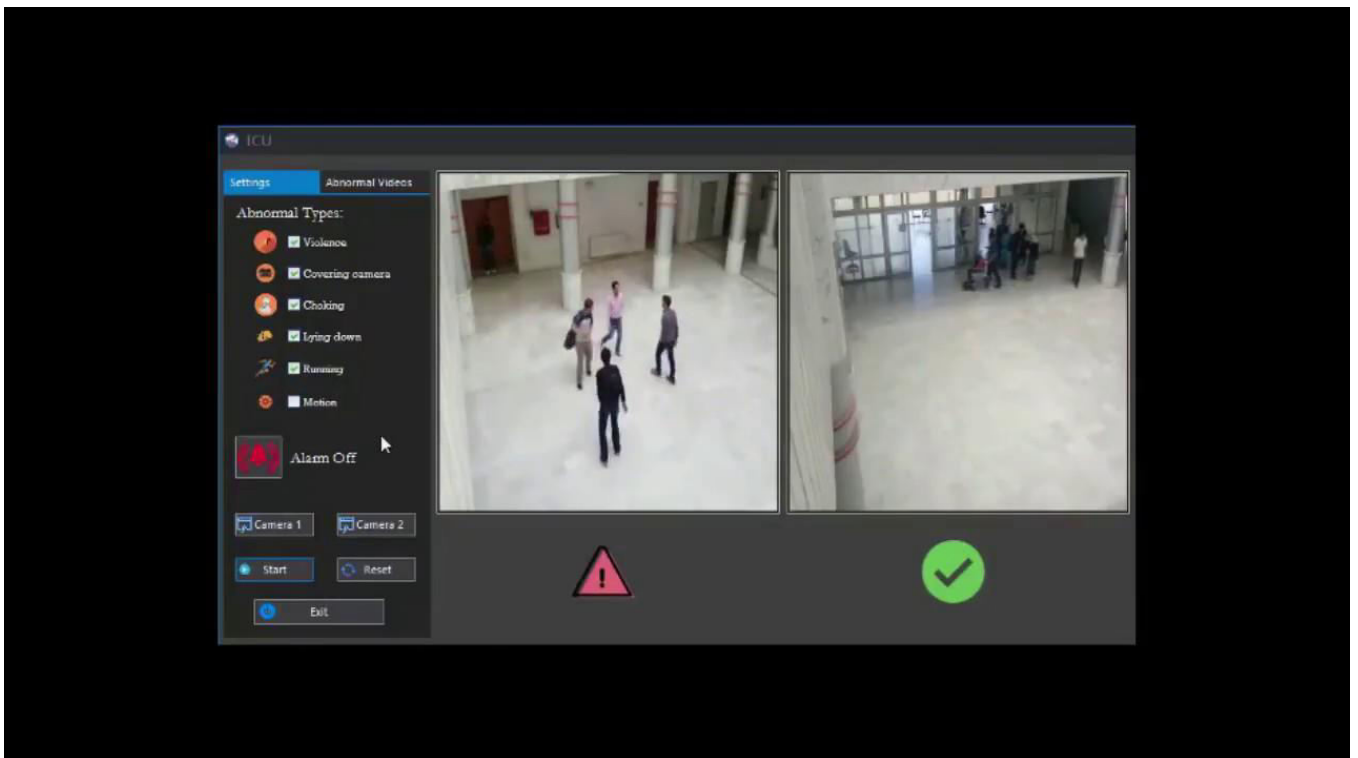


Fig 2. System Screen

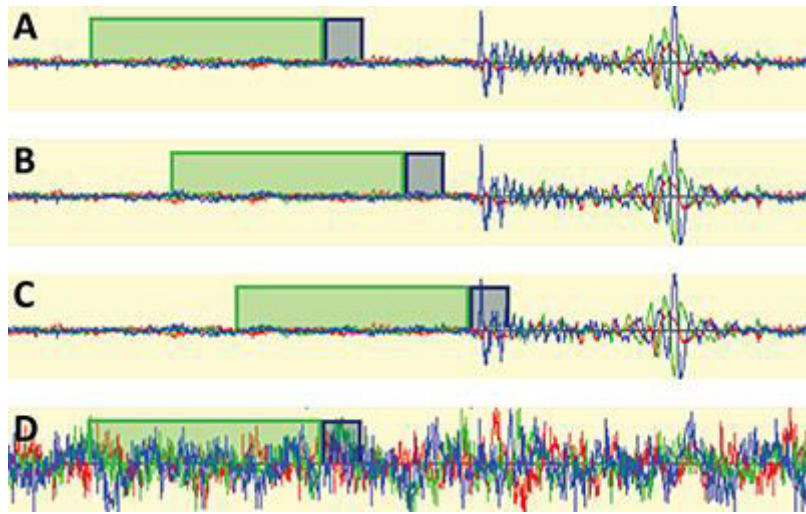


Fig3. Event Detection Sound

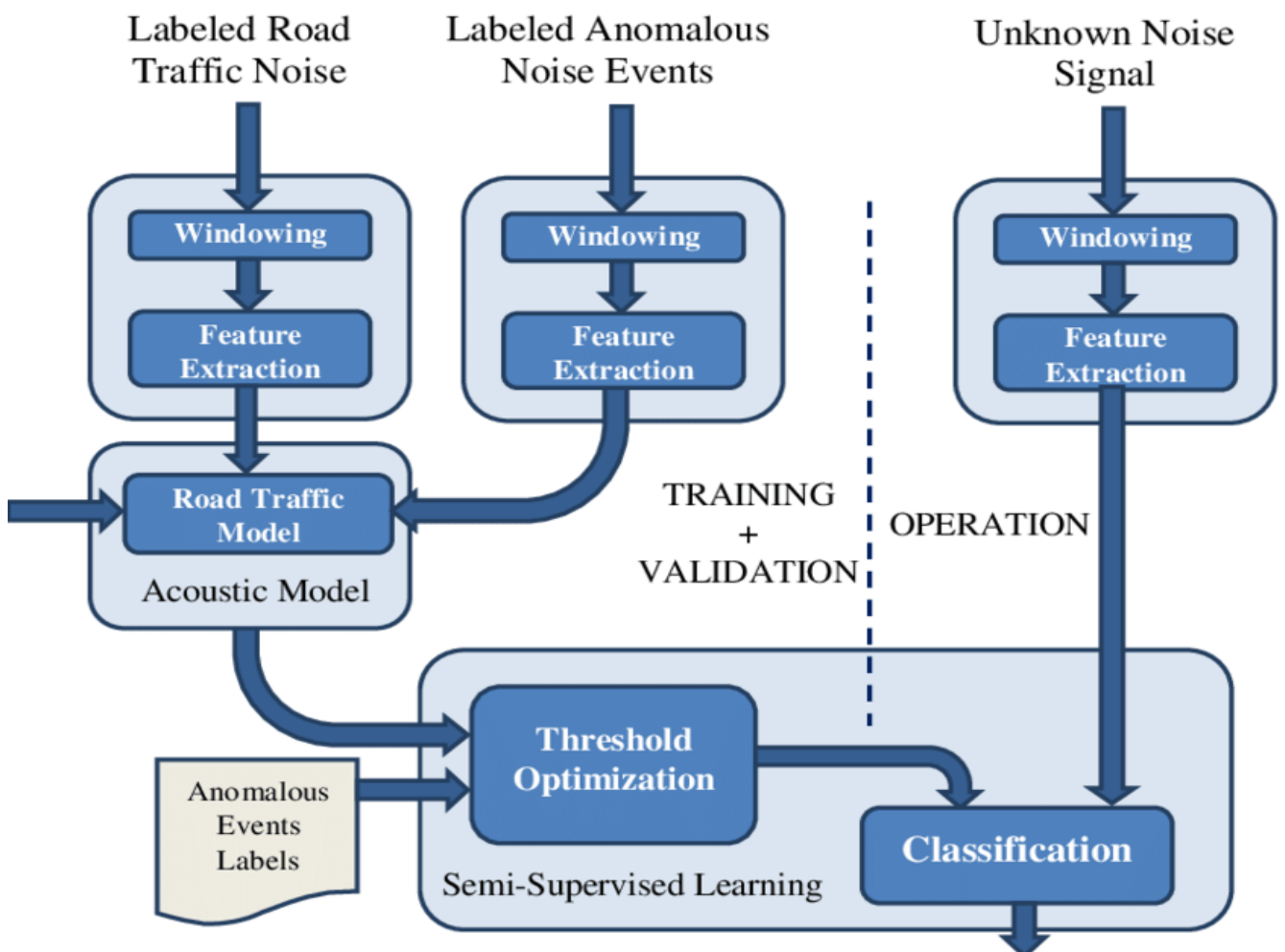


Figure: Block Diagram Displaying Internal Working.



**Analysis:** Working of the website inshort.

- 1) Recorded videos or live
- 2) Detect the event we have put the system.
- 3) Give alert of the particular event.
- 4) It also helps in security purpose.
- 5) Many events can be done through this.

#### IV. CONCLUSION AND FUTUREWORK

It will be more helpful in security reasons. It can detect abnormal events which will be very helpful for us. This work introduced and validated an event detection system at an early stage based on the user behavior information extracted from OSNs, highlighting the relevance of incorporating the user behavior change analyses into solutions of this kind. In general, the experimental results obtained demonstrate that users clearly react when some events occur. This reaction is reflected in the number of posted messages and the message topics. Therefore, tracking the user behavior in OSNs permits to identify events in specific regions, and at the beginning of the event. The proposed event detection system was composed of different modules, and each module of the solution was evaluated and found to have an accuracy higher than the related works referred to in the study.

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