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Tracking the Nanoparticles using Multi Tracking Method in Human Crowds

Dr.A.Shyamala| S.Vengatesh Kumar| Dr.C.Priya| Dr.I.Sheik Arafat

Department of Electronics and Communication Engineering, Mohamed Sathak Engineering College, Kilakarai, Tamilnadu, India.

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ABSTRACT

In our proposed we tracking the nanoparticles using multi-tracking method. The multi tracking method will help to track the multi object in single frame. In our proposed nanoparticles tracking the particles are spilt at each frame so the frames the object is increases for tracking. It is the main trajectory of the nanoparticles multi tracking. In that cause we introduce new method for our proposed to track the nanoparticles.

KEYWORDS:*Nano particles, multi tracking,background modeling,track management*

I. INTRODUCTION

In many applications, such as video surveillance, content based video coding, and human–computer interaction, moving object detection is an important and fundamental problem. The general technique for moving object detection is background elimination under the situation of fixed cameras. Detection of moving objects in video each individual. Crowd performance and to detect irregular activities at the crowd level rather than at the individual level.

Crowd analysis also finds applications in crowd simulation, crowd management, disaster management, outlet planning as well as other related areas. The purpose of this study is to analyses the crowd behavior in real time in order to detect abnormalities that could lead to dangerous situations using computer vision and machine learning techniques. This paper is organized as follows; motivation and related works are discussed in section II. The proposed method of abnormal crowd detection and tracking is explored in section III. Experimental results are given in section 4 and conclusion is drawn in section 5.stream is the first related step of information removal inmany computer visualization applications, including video surveillance, people tracking, traffic monitoring, and semantic annotation of videos.

Video cameras are extensively used in surveillance application to examine public areas, such as train stations, airports and shopping centers. When crowds are intense, automatically tracking individuals becomes a difficult task. Anomaly detection is also known as outlier detection, which is applicable in a verity of application.

Our proposed frame work is to implement a new tracking technique. Human monitoring is tiring, expensive, and ineffective. Our approach is a real time contribution to abnormal event detection and uses the motion of computational attenuation which quantifies motion saliency. The proposed method can be applied from small group of objects to dense touching moving objects like crowed. Crowded environments are very complicated to monitor by human observer, whether live or by means of video surveillance, because the optical

patterns are highly recurring and the difficulty of the movement characterize the scene is often overpowering. Crowd finding is particularly significant in the background of intellectual and automated video surveillance systems proposed for large venues and public events, such as football games and concerts, as well as for such general environments as City Street and underground train stations during pinnacle hours.

A crowd element can be defined as a region related to more than one person who has logical and identical motion. Crowd movement tracking is quite dissimilar from tracking individuals in the crowd. When individuals are being tracked, the information is compute at the level of each individual. One purpose is to construct model of crowd performance and to detect irregular activities at the crowd level rather than at the individual level. Crowd analysis also finds applications in crowd simulation, crowd management, disaster management, outlet planning as well as other related areas. The purpose of this study is to analyses the crowd behavior in real time in order to detect abnormalities that could lead to dangerous situations using computer vision and machine learning techniques.

This paper is organized as follows; motivation and related works are discussed in section I. The proposed method of abnormal crowd detection and tracking is explored in section II. Experimental results are given in section III and conclusion is drawn in section IV. Related works the detailed literature survey of our work is presented in this section. Abnormality detection is classified into two categories; trajectory analysis and motion analysis. Trajectory analysis is based on object tracking and typically requires normal environment to operate. Motion analysis is better suitable for crowded scenes by analyzing patterns of movement rather than attempting to distinguish object. Some of the few existing works consider the relationship between pedestrians' social behaviors and their walking scenarios.

Recently, some methods [1], [2] utilize crowd flow and semantic scene knowledge to detect abnormal activity and obtained good results. But these methods can be only applied for some simple scene (e.g. single sink/source, single crowd flow). There have been attempts to model crowds based on discriminative classifiers [3].

The analysis of crowd behavior and movements are of particular In the circumstances where few operators are monitor behavioral analysis of crowds in hundreds of cameras is useful as a very tool for video pre-screening. Activity and event detection has got more concentration in automated Recently, Mehran et al. [10] propose a method to model behaviors among a group of people.

It represents the abnormal patterns in a local region based on moving Particles. The detection of Object Put is based on dual foreground algorithm where the divergence in response is analyzed. Based on over completes set of low-level spatiotemporal features and the mining of a dense a new technique for action recognition is implemented [11]. The tracking system is a basic blob tracker described in [12].

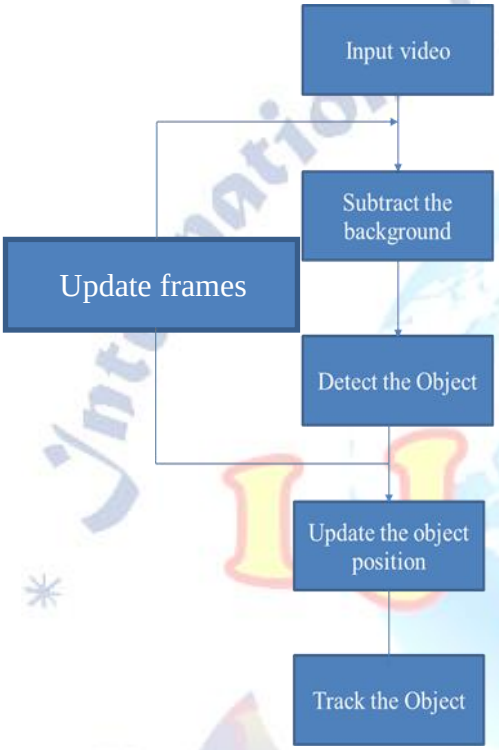
It is composed of two main components: (1) background modeling, and (2) track management. First, foreground/background segmentation is performed and then, objects are tracked with a combination of blob matching and particle filtering techniques. Ramin Mehran *et al* proposed a method to detect and focus abnormal activities in crowd videos using social force model.

This paper is tested on publicly presented dataset of normal and abnormal crowd videos. The proposed method is confining the abnormal activities in contrast
to use of optical flow Louis Kratz et al a proposed new statistical framework for modeling the local spatio-temporal motion pattern behavior of extremely crowded scenes. Previous work in this paper of unusual event detection is classified into two categories; explicit and deviation methods. Deviation method is usual activity; it can detect the unusual events. Event detection approach model is each specific activity for identification in videos. The tracking-based model for extremely crowded scenes would also disregard the important correlation between pedestrians within close proximity of each other [14]. Hui Ma, et al, proposed a method is the robust descriptor for encoding the intrinsic local and global behavior signatures in crowded scenes. The crowd scenes conversion from normal to abnormal behaviors such as rush and scatter were detected.

This method is evaluating the other methods for anomaly detection in crowds with a very good detection accuracy rates. This report is not based on motion tracking.[15]. The future method a new tracker which employs a element filter tracking structure, where the state transition model is estimated by an optical-flow algorithm. The optical-flow algorithm is used to estimate the state transition. The optical-flow vector is more accurate than the fixed models. The proposed tracking

method is better than the performance is largely improved compared with state of
the art trackers.

II.PROPOESED WORK



III. EXPERINMENTAL RESULTS

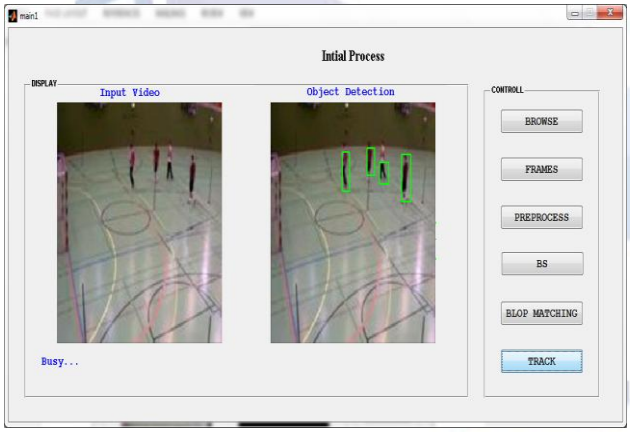


Figure 1: Object detection by tracking

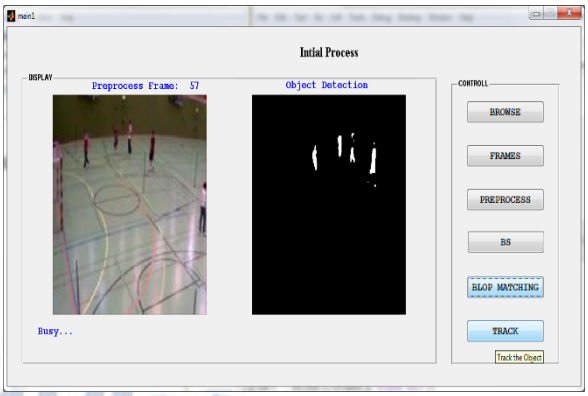


Figure 2: Preprocessing and object detection by BLOP matching

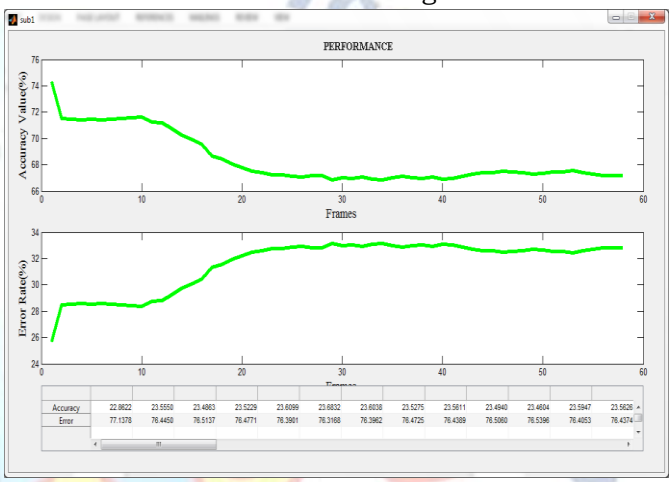


Figure 3: Performance evaluation

IV. CONCLUSION

In proposed tracking give the better tracking result compare to the existing methods. That tracking is done crowded video which tracking the spiting and merging of particles. Our proposed method is good nanoparticle tracking and that process is done in MAT lab. In feature we track anomaly in the video frames for identify the abnormal event it helps to monitor the survey line for abnormal behavior.

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