

ADVANCED CCTV CAPTURE AND REPORTING SYSTEM

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ABSTRACT

A main objective of the project is focused on the work done in the way of tracking and detecting images in the way of mail conversation because of particular location fix an CCTV that only taken videos and require hard ware's so that kind of properties not used so that part of things. In this kind of project used lot of areas like hotels, malls, theaters, and more places or areas needed now a generation and lot of things updating similarly algorithm also. Nowadays problem were create in so many places even though fix a CCTV somebody was theft or broken that time we decide some strategies for this generation. Mail conversation is help us to identify the object in the manner of framing concept

I. INTRODUCTION

Identification and Tracking of objects is an important factor in analysis of video in a surveillance system. It provides the extraction of the information from frames and video sequences which can be multiple processor vision applications for example, CCTV based surveillance, understanding an activity in focus, analyzing flow of traffic, classifying and tracking an object. This exhibits that identifying and tracking an object is an important field of research in computer vision and its applications in various surveillance systems. CCTV based surveillance has become a demanding technology due to increase in terrorist threats, increase in public\private safety concerns, increase in crime rate, efficient management of public properties and various modes of transportation. Past work in the field of 'Video Surveillance', have presented various different methods. In real word scenario alarm generation in a tracked/traced event is dependent upon accuracy of these proposed models on various researches. The most accurate methodology developed has an accuracy rate of more than fifty percent; this method does a two phased background detection using parametric method, for optimum results. Also it employs background elimination method so as to reduce processing load

II. HEADING

In my journal topics are I. Introduction, III Modules, IV Proposed System, V Existing System, VI Block Diagram, VII System Testing and Implementation, VIII Conclusion, and XI Reference

III. MODULES

Development is the process of converting a new system design into operation. It is the phase that focuses on user training, site preparation and file conversion for installing a candidate system. The important factor that should be considered here is that the conversion should not disrupt the functioning of the organization.

- Tracking of the detected object
- Update background model
- Classification of moving objects
- Background subtraction and normalized cut segmentation

Tracking of the detected object

It is the process of predicting the object's path when it moves about the scene. A new object tracking method has been presented in the paper. It is accomplished for appropriate time duration by detecting only pixels of foreground. The presented algorithm utilizes optical flow method for object tracking which can detect both moving objects as stationary objects. Furthermore, the method also differentiates between objects, in case of stationary objects.

Update background model

The model must be updated, when the background scene changes. This step is very crucial to achieve favorable results eventually. It turns out into variation of changes in the scene while updating the background model such as moved background objects, video running problems, illumination variations, static foreground objects for a long period of time. Here we have adopted a simple moving average method so as to smooth the background model.

Classification of moving objects

The frequent features for classification of moving object based on shape include the bounding rectangle, area, gradient and silhouette of detected object regions. The proposed algorithm utilizes the aspect ratio. The lot of information to classify detected objects

Background subtraction and normalized cut segmentation

Background subtraction approach compares the estimated background with current frame to detect motion. It is integrated with normalized graph cut segmentation. The objective of segmenting the image is to cluster pixels into salient image regions. There are number of methods for segmentation based on finding minimum cuts in a graph, where the criterion for cut is considered so as to minimize the similarity between pixels that are being split. The self-similarity of regions has been taken into account by Normalized Cut Criterion.

IV. PROPOSED SYSTEM

The current security system, specifically, the well-known CCTV, consumes a lot of resources such as memory, due to nonstop recording. Verify, they are efficient but it takes a while before one gets back to locate the precise time where an event happened in the area under surveillance.

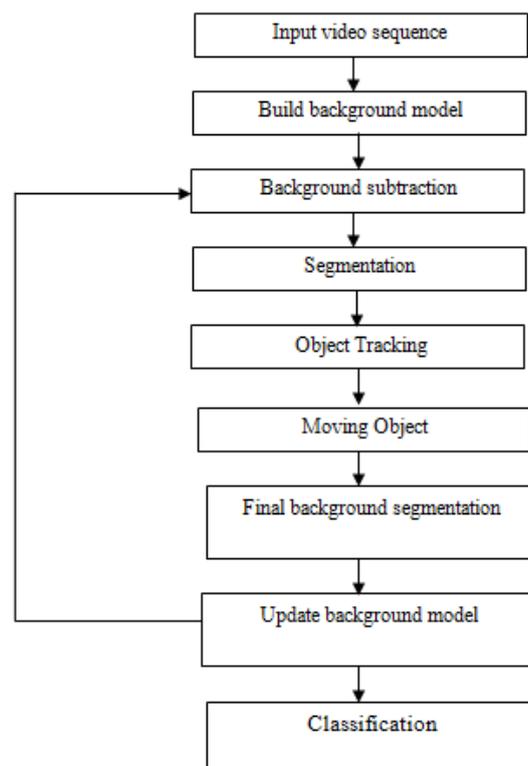
One has to rewind and fast forward, going back and forth to search a particular scene and that takes a lot of time and effort. Furthermore, time is needed to keep watch on the activities going on via the screen. Something may be happening but due to negligence and human errors it may pass by without been noticed, until something

happens. Then the search will begin without any idea of where to start searching with lots of videos to go through. As such, much attention and concentration is required to avoid missing important and significant activities. The proposed algorithm integrates Background subtraction with normalized graph cut segmentation which is robust against any changes in the illumination of the frame or the "ghosts" which are left by removed or extracted objects. Further, the algorithm performs a step by step tracking and classification of the detected object with more accuracy and within minimum processing time.

V. EXISTING SYSTEM

In the existing system 'Video Surveillance', have presented various different methods each having different collection of tracking data. In real word scenario generation in a tracked/traced event is dependent upon accuracy of these proposed models on various researches. The most accurate methodology developed an accuracy rate of more than fifty percent, this method background detection using parametric method, for optimum results. Also it employs background elimination method so as to reduce processing load. The main limitation is the rectification of ghost background. This methodology can be taken forward with a mix of earlier discussed method to achieve a better accuracy rate and hence making it reliable system. Most research work till date seems to be focusing over one challenge and resulting solution causes another challenge, such as while segregating background from object such assumptions were made which cannot be feasible in real world scenario. Background segregation needs to be done with no ghost image area, which has not been achieved effectively, without compromising processing involved.

VI. BLOK DIAGRAM



VII. SYSTEM TESTING AND IMPLEMENTATION

TESTING

Testing is the process of detecting errors. Testing performs a very critical role for quality assurance and for ensuring the reliability of software. The results of testing are used later on during maintenance also.

TESTING OBJECTIVES

The main objective of testing is to uncover a host of errors, systematically and with minimum effort and time.

- Testing is a process of executing a program with the intent of finding an error.
- A successful test is one that uncovers an as yet undiscovered error.
- A good test case is one that has a high probability of finding error, if it exists.
- The tests are inadequate to detect possibly present errors.
- The software more or less confirms to the quality and reliable standards

TYPES OF TESTING

Unit Testing

Unit testing focuses verification effort on the smallest unit of software i.e. the module. Using the detailed design and the process specifications testing is done to uncover errors within the boundary of the module. All modules must be successful in the unit test before the start of the integration testing begins. In this application developer tests the programs up as system.

Link Testing

Link testing does not test software but rather the integration of each module in system. The primary concern is the compatibility of each module. The Programmer tests where modules are designed with different parameters and length.

Integration Testing

The goal here is to see if modules can be integrated properly, the emphasis being on testing interfaces between modules. This testing activity can be considered as testing the design and hence the emphasis on testing module interactions.

In this project integrating all the modules forms the main system. When integrating all the modules have checked whether the integration effects working of any of the services by giving different combinations of inputs with which the two services run perfectly before Integration.

Acceptance Testing

Acceptance Test is performed with realistic data of the client to demonstrate that the software is working satisfactorily. Testing here is focused on external behavior of the system; the internal logic of program is not

emphasized. Test cases should be selected so that the largest number of attributes of an equivalence class is exercised at once. The testing phase is an important part of software development. It is the process of finding errors and missing operations and also a complete verification to determine whether the objectives are met and the user requirements are satisfied.

White Box Testing

This is a unit testing method where a unit will be taken at a time and tested thoroughly at a statement level to find the maximum possible errors. There tested step wise every piece of code, taking care that every statement in the code is executed at least once. The white box testing is also called Glass Box Testing.

Black Box Testing

This testing method considers a module as a single unit and checks the unit at interface and communication with other modules rather getting into details at statement level. Here the module will be treated as a block box that will take some input and generate output. Output for a given set of input combinations are forwarded to other modules.

VIII. CONCLUSION

The project describes an advanced algorithm based framework which is capable of producing background with expected result. It also overcomes the trails of artificial "motion detection". The result is proved the process of the motion detection occurred at the time of the CCTV surveillance. The user can receive the snapshot of the picture of detection capture image. Each result are verified by the authority of the places.

SCOPE FOR FUTURE ENHANCEMENTS

In the future, the robustness of moving object detection under any motion types of mobile camera and various environments will be first examined. The asset of our method lies in the capability to detached background and foreground in correct and applied in simple way with low time consumption and less noise, and demonstrated efficiently in both static and dynamic background texture scene. The present system is process only with the single camera mode option. In future multiple cameras are accessed and analyze the motion detection process. But most of the systems do not absolutely detect the moving object because it causes some darkness and it requires large memory to store the video. By using Human Motion Detection system banks safe will be more secured as it will send alerts regarding burglary happening.

XI. REFERENCE

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