Implementation of IR based Image Processing Technique for Digital Camera Deactivation

Gouri Raut[1], Kajal Bakade[2], Prof. S.V. Kulkarni[3]
Student[1,2], Assistant professor[3]
BE, Electronics and Telecommunication, AISSMS IOIT, Pune, India[3]

_____

Abstract - The system locates the camera, and so neutralizes it. This paper intends to assist in maintaining the protection Associate in Nursingd security of individuals by developing an application with the assistance of that spy cameras will simply be detected, additionally the placement and also the perpetrator's identity would be sent to the involved authorities. It finds its application in courts and places wherever cameras don't seem to be allowed. during this paper, we tend to propose another system for recognizing and deactivating advanced cameras in photography restricted regions. This procedure can notice a camera and after kill it. It utilizes image handling for distinguishing camera's concentrate. within the wake of finding camera's concentrate Associate in Nursing infrared emission are going to be coordinated towards that concentrate which is able to twist the image by overexposure. The coordinated infrared emission causes solid change within the nature of the image. It does not interpose camera's activity and it's innocuous to the camera shopper. The projected work has applications, as an example, averting thieving at theaters. This work can serve advantageous at spots, as an example, galleries, enterprises, recorded landmarks, shows, evolving rooms, searching centers, gems stores wherever maintaining mystery is big issue.

Keywords - Image processing, Camera, IR transmitter;
_____

I. INTRODUCTION

The issue of hidden cameras at open spots is extremely foremost nowadays. These cameras are covertly placed up in evolving rooms, theatres and numerous different spots which represent a noteworthy risk to the protection of individuals. Motion picture appears when they are discharged are recorded and set up for open utilize route before the real legitimate CDs are made accessible in the market prompting immense misfortunes for the genuine proprietors who don't get their offer of the advantage. This task means to help in keeping up the wellbeing and security of individuals by building up an application with the assistance of which spy cameras can undoubtedly be identified. Likewise this undertaking discovers its application in courts and places where cameras are not permitted. A few people may contend that cameras are anything but difficult to discover and this proposition is in this way pointless, however hunting down undercover cameras is no less demanding an occupation. Physically checking their quality is relatively inconceivable, this framework will discover its application at such places. Mobile phones with camera square measure exceptionally basic these days. whereas going by spots, as an instance, galleries, museums, sanctuaries, shows or places wherever maintaining mystery may be a major issue, consumer conveys his advanced cell with him. Despite the actual fact that photography is disallowed in such territories, consumer tends to catch photos of those destinations covertly, that is not noteworthy. pondering the theft at theatres, Indian screenland endures significant losses owing to it. to take care of a strategic distance from such problems, we've got to create up a system which can establish such advanced movable camera or any camera and subsequently destroy image or video taken by that camera. within the in the meantime the system ought to not create any damage camera or the consumer. therefore system configuration goes for AN acceptable methodology that will not interfere camera's task aboard being innocuous for the consumer. System can simply distinguish camera in photography restricted zone and subsequently it'll turn out a solid infrared bar at each gismo to kill it from catching image or video. As we tend to square measure utilizing infrared rays for killing camera, it's neither a well-being peril to human nor it'll influence the recognized camera's activity. This discovery and deactivation technique for camera or different optical gismo will be a lot of useful in protection zones to differentiate conceivable assaults.

II. LITERATURE SURVEY

Design of IR based Image Processing Technique for Digital Camera Deactivation.

In this paper, we propose another procedure for identifying and deactivating digital cameras in photography disallowed regions. This procedure will find a camera and after that kill it. It utilizes picture handling for distinguishing camera's focal point or lens. Subsequent to finding camera's focal point an infrared light will be coordinated towards that focal point which will contort the picture by overexposure. The coordinated infrared light causes solid diminishment in the nature of the picture. It doesn't meddle with camera's activity and it is innocuous to the camera client. The proposed work has applications, for example, forestalling robbery at theaters. This work will serve gainful at spots, for example, galleries, enterprises, authentic landmarks, displays, evolving rooms, shopping centers, gems stores where keeping up mystery is huge issue.

Piracy Prevention System for Movie Theatres and Auditoriums

A standout amongst the most main strategies the movie privateers use to carry the film out of the theaters includes recording the film utilizing a camcorder or a top of the line cell phone with a decent quality camera. Henceforth it is important to build up a system that tends to this traditional method for motion picture robbery. This paper proposes an answer for this issue. The proposed system makes utilization of picture preparing procedures over a picture obtained from a camera mounted at a

_____

reasonable area over the movie theater screen. A comparable system can be utilized to ensure exclusivity of programs held in theaters and introduction lobbies.

III. PROPOSED SYSTEM

In our proposed system, a method for identifying and harming video nature of advanced cameras in photography restricted zones in view of picture handling is composed. The system will comprise of two sections: Camera location unit and Camera deactivating unit. Camera location unit incorporates web cam interfaced with PC. Web cam will be utilized to catch the pictures of precluded zone. The situation of the camera focal point will be observed by distinguishing and following the focal point. Discovery and Position of the focal point of camera will be followed by picture preparing. Control motion from camera recognition part will be created and sent through serial correspondence to microcontroller. IR transmitter will be utilized to lessen the nature of the caught picture. IR transmitter will be fitted on to the servomechanism. Servomechanism will be interfaced with Microcontroller. After location of camera focal point and its position a flag will be sent to Microcontroller board and board will work servomechanism with the end goal that IR transmitter will point toward distinguished focal point and emanate solid IR beams which will decrease the nature of caught picture.
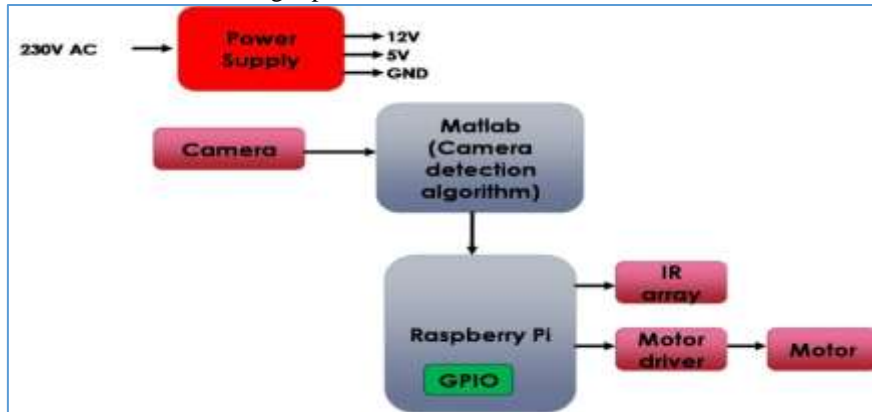

Figure 1: Block diagram of proposed system

- Algorithm running in Matlab will be continuously looking for camera lens.
- Once the lens is found it will send signal to raspberry pi.
- Depending on the location of camera in the captured picture raspberry pi will point and activate the IR array on the lens.
- For demo purpose we will be dividing the captured image into 5 different locations so that IR array can be pointed to those locations.
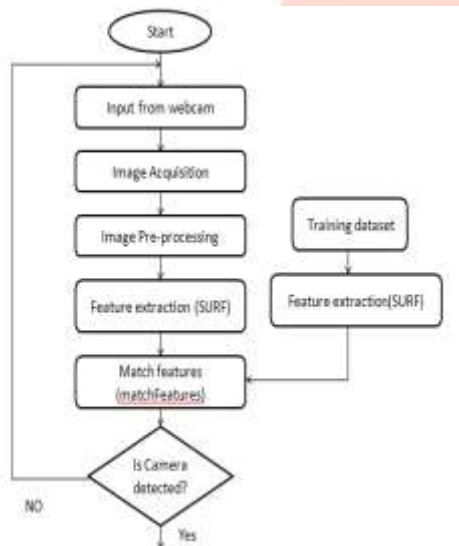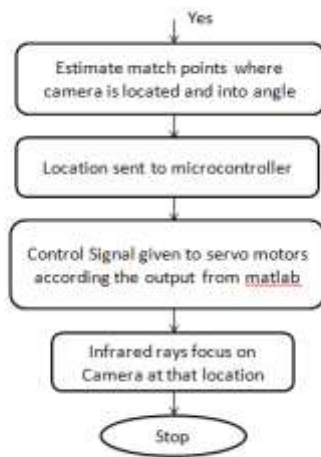
Figure 2: Algorithms

IV.   APPLICATIONS:
- Shopping malls,
- Jewelry stores
- Changing rooms
- Exhibitions
- Historical monuments

V.   ADVANTAGES:
- This system is designed to increase the security level.
- This system will have low cost, low power consumption and high accuracy.

VI.   CONCLUSION

The principle goal of this paper is to plan IR based picture preparing procedure for digital camera deactivation in photography precluded region. This system will find the greatest number of cameras by utilizing picture preparing calculations. The recognized cameras will be deactivated utilizing IR transmitters. This work will serve useful in the zones, for example, theatres for counteractive action of robbery. It has numerous applications which incorporate keeping up mystery at resistance territories, enterprises, innovative work segments, chronicled landmarks, religious spots, adornments stores, changing rooms at shopping centres.

VII.   REFERENCES

[1]   L. Mieremet, Ric (H.)M.A. Schleijpena, P.N. Pouchelle,"Modeling the detection of optical sights using retro-reflection",Laser Radar Technology and Applications XIII, edited by Monte D. Turner, Gary W. Kamerman, Proc. of SPIE Vol. 6950, 69500E,2008

[2] Khai N. Truong, Shwetak N.Patel ,Jay W. Summet ,Gregory D. Abowd,"Preventing camera recording by designing a capture resistant environment", Proceeding UbiCom'05 proceedings of 7th International Conference on Ubiquitos Computing , Pages 73-76, Springer-verlag Berlin, Heidelberg.

[3] Virendra Kumar Yadav, Saumya Batham, Anuja Kumar Acharya, "Approach to accurate circle detection: Circular Hough Transform and Local Maxima concept", Published in Electronics and Communication Systems (ICECS), 2014, International Conference on 13-14 Feb. 2014,

[4] J. Lukas,J. Fridrich,M. Goljan,"Digital camera identification from sensor pattern noise",Published in: IEEE Transactions on Information Forensics and Security ,Page: 205 - 214,Volume: 1, Issue: 2, June 2006 .

[5] Panth Shah, Tithi Vyas, "Interfacing of MATLAB with Arduino for Object Detection Algorithm Implementation using Serial Communication", International Journal of Engineering Research & Technology (IJERT), ISSN: 2278-0181,Vol. 3 Issue 10,page no. 1069-1071, October- 2014