LITERATURE SURVEY

Automatically understanding events happening at a site is the ultimate goal of visual surveillance system. This paper investigates the challenges faced by automated surveillance systems operating in hostile conditions and demonstrates the developed algorithms via a system that detects water crises within highly dynamic aquatic environments. An efficient segmentation algorithm based on robust block-based background modeling and thresholding-with hysteresis methodology enables swimmers to be reliably detected amid reflections, ripples, splashes and rapid lighting changes.[1]

Safety is paramount in all swimming pools. The current systems expected to address the problem of ensuring safety at swimming pools have significant problems due to their technical aspects, such as underwater cameras and methodological aspects such as the need for human intervention in the rescue mission. The use of an automated Visual -based monitoring system can help to reduce drownings and assure pool safety effectively. This study introduces a revolutionary technology that identifies drowning victims in a minimum amount of time and dispatches an automated drone to save them. Using convolutional neural network (CNN) models, it can detect a drowning person in three stages. Whenever such a situation like this is detected, the inflatable tube-mounted self-driven drone will go on a rescue mission, sounding an alarm to inform the nearby lifeguards. The system also keeps an eye out for potentially dangerous actions that could result in drowning. This system's ability to save a drowning victim in under a minute has been demonstrated in prototype experiments' performance evaluations.[2]

A real time drowning system can be also made using HSV color space system that uses the color space information in order to remove the unwanted colors and visual traits that can deviate the system from accurately detect drowning.[3]

Drowning is most terrifying accident to most of the children and adult which prevent them from using swimming pools for recreation and fitness .The present article focuses on accuracy in drown predict ,notify and saving inventions .Comparison and short falls in research work done so for done .Research gaps were identified in available art work and proposed improvements .This review article focused mainly of drown safety related inventions and research articles in databases .The present study thrown light on how many technologies were being used to predict and avoid drown deaths . [5]

Underwater drowning detection in public swimming pools is a challenging task.

To detect drowning swimmers, an implementable real-time detection system with high accuracy is needed. In this paper, we propose a novel camera-based drowning detection algorithm. The input video sequences are obtained from underwater cameras. Moving objects in the alert zone will be extracted from background by background subtraction. The inter-frame based denoising scheme is employed to eliminate complex interferences in the water. Experimental results are shown that the proposed algorithm can detect the drowning swimmer more accurately without massive computations. [6]

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