VirtualEYE -Life Guard for Swimming Pools to Detect Active Drowning

PROPOSED SOLUTION

PROBLEM STATEMENT:

THARUN is the regular swimmer who needs to know about his swimming And safety measurements in the water and he has to be monitor till the Completion of swimming competition

IDEA/SOLUTION DSESCRIPTION:

SwimEye is a computer vision detection system for the prevention of drowning incidents in swimming pools. SwimEye works like an "extra lifeguard" under the water of your pool. Our object recognition software tracks the movements of all swimmers in a pool.NPO.

To resolve the conflict, a system is being implemented along the swimming pools to save human lives. We are developing an underwater pool safety system that reduces the risk of drowning by studying body movement patterns and connecting cameras to artificial intelligence (AI) systems. Typically, such systems are created by installing more than 16 cameras underwater and on the ceiling and analysing the video feeds to detect any anomalies. However, as a point of contact, we use a single camera that streams video underwater and analyses swimmer positions to determine the likelihood of drowning; if the probability is higher, an alert is generated to draw the attention of lifeguards.

NOVELITY:

SwimEye develops, manufactures and retails rapid alerts for life-saving situations. Our flagship product is the SwimEye drowning prevention system for public swimming pools. SwimEye is a lifeguard support tool that works as an "extra lifeguard" in your pool.

Unlike other solutions, this is a human assistive system by nature.Errors are minimised but the negligence of humans will not affect the working of this solution. As the cameras are employed with ML, it can work 24/7 and even detect drowning of slightest amount.Instead of using YOLOv1 or YOLOv2 this proposed solution incorporates the lastest version of YOLO which is v3, this is way superior in performance and accuracy than the former. Using night-vision cameras can yield better results of the same solution without any major modification to the existing codebase. 6. As the predicted data and the past video footages are storaged in cloud, the model can be trained again and again as it is used to improve the accuracy with each run and so a life can be saved faster.

SOCIAL IMPACT/CUSTOMER SATISFACTION:

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BUSINESS MODEL:

Drowning detection system that detects every dangerous situation and accident. The software works in close integration with the cameras installed in the pool to continuously scan the pool. Thanks to this combination of hardware, software and profound innovations, the system would represent excellence in drowning detection. Features artificial intelligence technology that adapts to the needs of the user. It is the ultimate drowning detection system for those who demand the ultimate in safety. System would be able to record all the activities in the pools and to classify critical situations from normal ones to keep track of what happened. Makes itself heard loud and clear in case of danger. The built-in notification system produces alarms within seconds on configurable devices. In addition, the technology would provide real-time location and image of the danger, making rescue operations easier. Identify swimmers in distress and raise an alarm which alerts the Lifeguards who can visually assess the developing situation in seconds the developing situation in seconds Can provide very stable monitoring and highly effective drowning incident detection.

SCALABILITY OF SOLUTION:

The proposed solution of using a single camera system can be scaled to a larger swimming pool area with addition of cameras both under and over the water surface. Along with that, we can also increase the number of alarms fitted in the place to increase the magnitude of alertness that is produced by the system. On the point of efficiency and performance, additional algorithms can be ran with existing ones so as to improve both the compute efficiency and reduce the computational overhead of the proposed solution