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VIRTUAL EYE – LIFEQUARD FOR SWIMMING POOL TO DETECT ACTIVE DROWNING

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ABSTRACT

Swimming is a wonderful sport and it helps in maintaining both body and mental fitness Though swimming has so many advantages, it has become a major reason behind several unintentional fatal accidents and is taking millions of innocent lives needlessly around the world. The ubiquity of drowning was much higher than they appear as reported by World Health Organization or several government statistics, leading to great negligence of this ever-increasing threat. The present paper shows a technological multi layer solution to this problem with the help of novel algorithm and available technology. The framework is a combination of an elevator housing array of Proximity-sensors, Lasertrip wire modules, pull switches on sidewalls of the pool, to detect any human body lying on the bottom surface of the pool, a drain-motor, alerting lights and buzzer, and keeping the elevator assembly on top of the swimming pool in non-operational timings of the pool preventing accidental falls of children or pets in the pool. Several other forms of alerting methods like a loudspeaker outside the pool, color lights around the pool upper walls were also added to the system to predict the alert occurrence of a drowning accident and seek immediate rescue. The

system also possesses a power-on self-test to assure safety. The proposed system is implemented in a miniature form. The performance of the prototype is satisfactory and giving promising results.

INTRODUCTION

The drowning detection system is based on AngelEye LifeGuard software, the result of **15 years of development and testing** on hundreds of different pools installed in different areas of the world.Hundreds of algorithms, in addition to an innovative and specific **Artificial Intelligence** developed by AngelEye for the targeted purpose of drowning detection, are applied to the videos coming from the cameras, recognizing all the people in the pool and following their movements.The **scanning and modeling in 3 dimensions** realized in real time by the software, allows the identification of the exact position of people in water which is important to set off alarms even near the surface and not only the bottom of the pool.

LITERATURE SURVEY

Swimming pool drowning monitoring system based on video technology is mostly reported in the literature. There are three kinds drowning monitoring system according to the different position of the camera. One is that the camera is mounted on the underwater swimming pool wall, then monitor underwater swimmer status. A limitation of this equipment is that if too many swimmers, the occlusion problem arises.

The other is that the camera is mounted upon the water, and monitors the Swimmer posture change. The reflection and refraction of light in air-water interference will affect the image quality, and drowning man feature this method detected is not easy to distinguish swimmers and divers obviously. The third is a combination of the two, underwater camera and aerial camera matched, monitoring the swimmer posture. This system needs constant observation which is the main disadvantage.

ADVANTAGES

- You can enjoy the nice wheather
- Lifeguard can relax during their work day
- People will appreciate your support

DISADVANTAGES

- Many lifeguard have to quit their carees eary
- You will not learn hard skills
- Hard to Switch fields your as a lifeguard

CONCLUSIONS

Consistently numerous people, including kids, are suffocated or near suffocating in the deeps of the swimming pools, and the lifeguards are not prepared all around to deal with these issues. In this manner raises the necessities for having a framework that will thus recognize the suffocating people and alert the lifeguards at such hazard. It can be

installed in International standardized schools where classes are held for training kids

REFERENCES

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