Project Design Phase-I

ProposedSolution

Date	24 September 2022
Team ID	PNT2022TMID39919
Project Name	Virtual Eye - Life Guard for Swimming Pools to Detect Active Drowning
Maximum Marks	2 Marks

Proposed Solution:

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	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
2.	Idea / Solution description	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
3.	Novelty / Uniqueness	SwimEye develops, manufactures and retails rapid alerts for life-saving situations. Our flagship product is the Swim Eye drowning prevention system for public swimming pools. Swim Eye is a lifeguard support tool that works as an “extra lifeguard” in your pool.

4.	Social Impact / Customer Satisfaction	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.
5.	Business Model (Revenue 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.
6.	Scalability of the 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.