

Project Design Phase-I

Proposed Solution Template

Date	27 September 2022
Team ID	PNT2022TMID31103
Project Name	VirtualEye - Life Guard for Swimming Pools to Detect Active Drownin
Maximum Marks	2 Marks

Proposed Solution Template:

Project team shall fill the following information in proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Drowning incidents are potentially severe but thankfully rare for most lifeguards. Due to the infrequency of drowning incidents, the visual search for such occurrences is challenging (Lanagan-Leitzel, Skow & Moore, 2015). The difficulties involved in detecting infrequent drowning targets are reflected in other areas of real-world visual search with uncommon targetitems, such as airport security screenings (Wolfe, Horowitz & Kenner, 2005; Biggs & Mitroff,2015).
2.	Idea / Solution description	a real time drowning detection method based on HSV color space analysis is presented which uses prior knowledge of the video sequences to set the best values for the color channels. Our method uses a HSV thresholding mechanism along with Contour detection to detect the region of interest in each frame of video sequences. The presented software can detect drowning person in indoor swimming pools and sends an alarm to the lifeguard rescues if the previously detected person is missing for a specific amount of time.
3.	Novelty / Uniqueness	The presented algorithm for this system is tested on several video sequences recorded in swimming pools in real conditions and the results are of high accuracy with a high capability of tracking individuals in real time.
4.	Social Impact / Customer Satisfaction	Designed for whom has to guarantee every day the safety in public and intensive-use pools, AngelEye LifeGuard detects potential drownings and promptly notifies you. It features the latest artificial intelligence

		technology and adapts to the needs of the user. It's the ultimate drowning detection system for those who demand the ultimate in safety.
5.	Business Model (Revenue Model)	AngelEye LifeGuard is a drowning detection system that detects every dangerous situation and accident. The AngelEye 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, today AngelEye LifeGuard represents excellence in drowning detection
6.	Scalability of the Solution	A robust human tracking and semantic event detection within the context of video surveillance system capable of automatically detecting drowning incidents in a swimming pool