

Project Design Phase-II
Solution Requirements (Functional & Non-functional)

Team ID	PNT2022TMID19579
Project Name	VIRTUAL EYE LIFEGUARD FOR SWIMMING POOL TO DETECT ACTIVE DROWNING SYSTEM
Maximum Marks	4 Marks

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	Installation	Needed to be fixed under the water of swimming pool, without creating any disturbance (such as water bodies, people, other objects).
FR-2	Detection	To detect the person in unconscious state.
FR-3	Support	Use a YOLO algorithm and database it required for to detect the person and take the help of lifeguard.
FR-4	Audio	Shout for help or keep calm if the person is unconscious.
FR-5	Alert	Set alarm if any person drowning inside the swimming pool to send the message for lifeguard to save the victim life.

Non-functional Requirements:

Following are the non-functional requirements of the proposed solution.

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	The lifeguard should be present all the time in the swimming pool.
NFR-2	Security	Lifeguard should be awareness of the alert message to save the life of the victim.
NFR-3	Reliability	To shout the alarm and send the message helping to avoid panic even in critical situations.
NFR-4	Performance	The alarm is triggered when the swimmer is detected as drowning situations.
NFR-5	Availability	Equipment and accessories include lifesaver rings, skimmer, telescopic handle, triggered alarm, first aid kit, spine boards, rescue tubes.
NFR-6	Scalability	Virtual eye lifeguard detects the potential drownings and promptly notifies you. It features the latest artificial intelligence technology.