

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

Date	11 November 2022
Team ID	PNT2022TMID51401
Project Name	Virtual Eye - Life Guard For Swimming Pools To Detect Active Drowning
Maximum Marks	4 Marks

Functional Requirements:

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	To ensure the safety of each and every person present in the pool. A Lifeguard should be present all the time in the pool
NFR-2	Security	Lifeguards should be aware of the alert message to save the life of the swimmer.
NFR-3	Reliability	Virtual eye lifeguard triggers an immediate prior alarm if a swimmer is in peril, helping to avoid panic even in critical situations.

NFR-4	Performance	The alarm is triggered when the swimmer's pulse rate is decreasing.
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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 without creating any disturbance to the people in the swimming pool.
FR-2	Detection	Detecting the human bodies and counting.
FR-3	Audio	Ask for help or stay quiet if the person is unconscious.
FR-4	Support	Take swim tubes or take the help of rescue.
FR-5	Pulse Rate Sensor	A pulse sensor on the that <b>measures the changes in light absorption and reflection onto the skin to measure blood flow.</b>
FR-6	Prior Alert	Send alert message to the lifeguard.

Non-functional Requirements:

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

NFR-5	Availability	Equipment and accessories include lifesaver rings, inflatable vests, a Shepherd's Crook, life hooks, spine boards, rescue tubes, and a first aid kit. Remember to keep them accessible to quickly pull someone from the water safely.
NFR-6	Scalability	It detects potential drowning and promptly notifies you. It features the latest artificial intelligence technology and adapts the needs of the user.