

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

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Project Name	Virtual eye – lifeguard for swimming pools for active drowning
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 without creating any disturbance to the people in the swimming pool.
FR-2	Deduction	Either horrified or in unconscious
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 rescuer
FR-5	Pulse rate sensor	Detect the pulse rate of a swimmer
FR-6	Prior Alert	Send alert message to the lifeguard

**Non-functional Requirements:**

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

FR No.	Non-Functional Requirement	Description
NFR-1	<b>Usability</b>	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	<b>Security</b>	Lifeguards should be aware of the alert message to save the life of the swimmer
NFR-3	<b>Reliability</b>	Virtual eye lifeguard triggers an immediate prior alarm if a swimmer is in peril, helping to avoid panic even in critical situations.
NFR-4	<b>Performance</b>	The alarm is triggered when the swimmer's pulse rate is decreasing
NFR-5	<b>Availability</b>	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	<b>Scalability</b>	Virtual eye lifeguard detects potential drownings and promptly notifies you. It features the latest artificial intelligence technology and adapts to the needs of the user.