

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

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| Date | 09 November 2022 |
| Team ID | PNT2022TMID26275 |
| Project Name | Virtual Eye - LifeGuard For Swimming Pools To Detect |
| 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. |

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| NFR-2 | Security | Lifeguards should be aware of the alert message to save the life of the swimmer |
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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 | First we should Needed to be fixed in the underwater of the swimming pools without creating any disturbance to the people |
| FR-2 | Deduction | Detect the person in the swimming pool who is either horrified or in an unconscious stage. |
| FR-3 | Pulse rate sensor | Detect the pulse rate of a swimmer |
| FR-4 | Support | Take swim tubes or take the help of rescuer |
| FR-5 | Audio system | Send an audio alert via audio system in the swimming pool. |
| FR-6 | Prior Alert | Send alert message to the lifeguard |

Non-functional Requirements:

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

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|-------|---------------------|---|
| 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 or increasing |
| NFR-5 | Availability | Equipment include lifesaver rings, rescue tubes, inflatable vests, a Shepherd's Crook, life hooks, spine boards, and first aid kit etc Remember to keep them near of the swimming pool. |
| NFR-6 | Scalability | Virtual eye lifeguard detects potential drownings and promptly notifies you. It features the latest artificial intelligence Technology , machine learning , deep learning etc and it easily adapts to the user. |