

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

| | |
|---------------|--|
| Date | 26 October 2022 |
| Team ID | PNT2022TMID06627 |
| 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 | User registration | Register via Email/Phone number and get verified for further use |
| FR-3 | Deduction | Either not moving or in unconscious state |
| FR-4 | Support | Take swim tubes or take the help of rescuer. |
| FR-5 | Alert | Set alarm and send message through the application to life guard. |
| FR-6 | Output | Vision based monitor Image, position and movement detection Drowning is detected Resue drowning people by Life Guard |

Non-functional Requirements:

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

| 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 is detected as drowning |
| 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 | 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. |