Project Design Phase-II

Solution Requirements (Functional & Non-functional)

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| Date | 10 November 2022 |
| Team ID | PNT2022TMID53903 |
| Project Name | Virtual Eye – Life Guard For Swimming Pools For Active Drowning |
| Maximum Marks | 4 Marks |

# Functional Requirements:

Following are the functional requirements of the proposed solution.

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| **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 | Yolo Algorithm | Detect the drowning activities of the swimmer |
| 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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| **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 |
| 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 drowning |
| NFR-5 | **Availability** | Equipment and accessories include lifesaver rings, inflatable vests, aShepherd'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 intelligencetechnology and adapts tothe  needs of the user. |