**Project Design Phase-II**

**Solution Requirements (Functional & Non-functional)**

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| Date | 08 October 2022 |
| Team ID | PNT2022TMID28664 |
| Project Name | VirtualEye - Life Gaurd for Swimming Pools To Detect Active Drowning |
| Maximum Marks | 4 Marks |

**Non functional requirements:**

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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. |
| 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, 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. |

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| 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. |

**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 | 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 a rescuer. |
| FR-5 | Alert | Set alarm and send message through the application to lifeguard. |
| FR-6 | Output | Vision based monitor Image, position and movement detection  Drowning is detected  Rescue drowning people by LifeGuard |