**Project Design Phase-II**

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

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| Date | 18 October 2022 |
| Team ID | PNT2022TMID30922 |
| Project Name | VirtualEye - Life Guard for Swimming Pools to Detect 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 | User Registration | Registration Via Email  Registration Via phone number |
| FR-2 | User Confirmation | Confirmation via Email  Confirmation via OTP |
| FR-3 | Installation of Camera | Locating the Swimmers position  Monitor the Swimmers movement and detect the drowning person |
| FR-4 | Alarm system | Alert the lifeguard by triggering the alarm |
| FR-5 | Output | Vision based monitor  Image, position and movement detection  Drowning is detected  Rescue drowning people by Life Guard |

**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** | User-Friendly |
| NFR-2 | **Security** | By observing the swimmer's body movement and posture, our software has high security. |
| NFR-3 | **Reliability** | Performing Vision based security system for all type of swimming pools |
| NFR-4 | **Performance** | Using deep learning, image can be recognized. If the image is detected, it triggers the alarm to alert the  Life Guard who rescue the drowning peoples |
| NFR-5 | **Availability** | 24/7 monitoring cameras |
| NFR-6 | **Scalability** | Our software system can be used by the company driver who manages the pools. We use the IBM cloud server to collect and maintain the data. We will ensure the safety of the swimmers |