

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

|               |   |
|---------------|---|
| Date          | 03 October 2022   |
| Team ID       | PNT2022TMID48861  |
| Project Name  | Project-Virtual Eye-Life Guard for Swimming Pools to Detect Active Drowning |
| Maximum Marks | 4 Marks   |

**Functional Requirements:**

Following are the functional requirements of the proposed solution.

| FR No. | Functional Requirement | Sub Requirement (Story / Sub-Task)   |
|--------|------------------------|--|
| FR-1   | User Registration      | Registration through Form<br>Registration through Gmail<br>Registration through LinkedIn             |
| FR-2   | User Confirmation      | Confirmation via Email Confirmation<br>via OTP   |
| FR-3   | Image recognition      | The system shall be able to take real inputs from the images and camera's fixed in the Swimming pool |
| FR-4   | Forest Monitoring      | The swimming pool are monitored through work hours.  |
| FR-5   | Alert                  | The system will alert notification to the life - guard when the person started drowning.             |
| FR-6   | Detection              | The system shall take training sets of swimming and checks for drowning in the pool.                 |
| FR-7   | Operating system       | The system can run as a service on python3.8 supported operating system.                             |

**Non-functional Requirements:**

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

| FR No. | Non-Functional Requirement | Description  |
|--------|----------------------------|--|
| NFR-1  | <b>Usability</b>           | Model is user friendly to use and very effective.                                |
| NFR-2  | <b>Security</b>            | More secure environment  |
| NFR-3  | <b>Reliability</b>         | Model is safe to install   |
| NFR-4  | <b>Performance</b>         | Model will achieve high accuracy   |
| NFR-5  | <b>Availability</b>        | Build model is available in all the time   |
| NFR-6  | <b>Scalability</b>         | Model can handle large amount of data and can easily adapt to every environment. |

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| NFR-7 | <b>Testability</b> | Putting in more training data into the model<br>Can improve the accuracy level of the system. |
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