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

Date	03 October 2022
Team ID	PNT2022TMID35895
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.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	Detection of People	Able to detect people in the water. Keep track of the count of people. Distinguish people from objects.
FR-2	Identify Danger	Identify people at risk of drowning. Distinguish drowning from other non-risky actions. Identify the actions people do to seek help.
FR-3	Probability of drowning	Calculate the degree of risk of drowning for every person. If the degree exceeds the limit, generate an alert.
FR-4	Communicate Danger	Let the rescue team know about the person drowning. Communicate the exact location of drowning.

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	Easy to implement and requires minimal and readily available resources and components.
NFR-2	**Security**	Vigilant. An alert is sent to the lifeguard when the probability of drowning is assessed to be high.
NFR-3	**Reliability**	Highly reliable, the system can be developed by installing more cameras underwater to detect any anomalies.
NFR-4	**Performance**	The system provides promising results and any crisis can be prevented quickly.
NFR-5	**Availability**	Everyone is under the watchful eyes of the camera. The system works continuously to give reliable security services.
NFR-6	**Scalability**	Even a fully occupied pool has no effect on performance. The system performs optimally.