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

Date	03 October 2022
Team ID	PNT2022TMID47734
Project Name	Project - 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	Camera from above	Images of drowning from above the pool. Videos of drowning from above the pool.
FR-2	Under water camera	Images of drowning inside the pool. Videos of drowning inside the pool.
FR-3	Software requirements	Windows 11
FR-4	Machine learning software	Pytorch, Keras, Tensorflow
FR-5	Programming languages	Python, HTML, CSS

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	It can be used in public pools and swimming to alert the lifeguard indicating someone is drowning.
NFR-2	**Security**	As the rescue is done as soon as the alert is on it can help in saving life.
NFR-3	**Reliability**	It gives an extra pair of an eyes i.e., virtual eye to our lifeguard which helps him/her to detect drowning easily.
NFR-4	**Performance**	It is faster than naked eyes which helps in rescue of the victim without missing the golden hour.
NFR-5	**Availability**	It can be made available to swimming pool owners, and for public pools to avoid drowning.
NFR-6	**Scalability**	As it uses images to identify movements The camera can have blind spots which will affect the performance of the system