Project Design Phase-I
Solution Architecture

Date	11 November 2022
Team ID	PNT2022TMID43216
Project Name	Project - Virtual Eye-Life Guard for swimming pools to detect active drowning
Maximum Marks	4 Marks

Solution Architecture:

Solution architecture is a complex process – with many sub-processes – that bridges the gap between problems and technology solutions. Its goals are to:

- Video surveillance can be used as a tool for monitoring and security. The visual monitoring capabilities can be employed in many different locations to help people live more safely.
- In swimming pool monitoring intelligent systems, different approaches have been proposed. Most methods perform background processing on input video frames. Some apply background subtraction and image denoising to detect the drowning person.
- IBM cloud, IBM Watson Studio, IBM cloudant DB, YOLO model, Python Flask and software python are used to develop the system.
- Virtual Eye Life Guard is a drowning detection system that detects every dangerous situation and accident. This works in close integration with the camera installed in the pool to continuously process the video frames.
- Virtual Eye Life Guard system is able to record all the activities in the pools and to classify critical situations from normal ones in order to keep track of what happened.
- This is specified under the feature Artificial Intelligence technonlogy and adapts to the needs of the swimmers. It manages and prevents drowning issues tremendously.

Solution Architecture Diagram: