Project Design
Phase-ISolution
Architecture

Date	27 October 2022
Team ID	PNT2022TMID40981
Project Name	Virtual Eye - Life Guard for Swimming Pools to Detect Active Drowning
Maximum Marks	4 Marks

Solution Architecture:

☐ By studying body movement patterns and connecting cameras to artificial intelligence (AI) systems we can devise an underwater pool safety system that reduces the risk of drowning. ☐ Usually, such systems can be developed by installing more than 16 cameras underwater and ceiling and analyzing the video feeds to detect any anomalies.

☐ but AS a POC we make use of one camera that streams the video underwater and analyses the position of swimmers to assess the probability of drowning, if it is higher then an alert will be generated to attract lifeguards' attention.

Solution Architecture Diagram:

```
[Camera] → Video frames → YOLO Model
                                          ↓
Showcase on UI ←—If No— Drowning person ← Detect the person in pool
       ↘                      ↓
    IBM Cloudant DB —— Showcasing On UI &
                       Triggered Alarm
```