Project Design Phase-II
Technology Stack (Architecture & Stack)

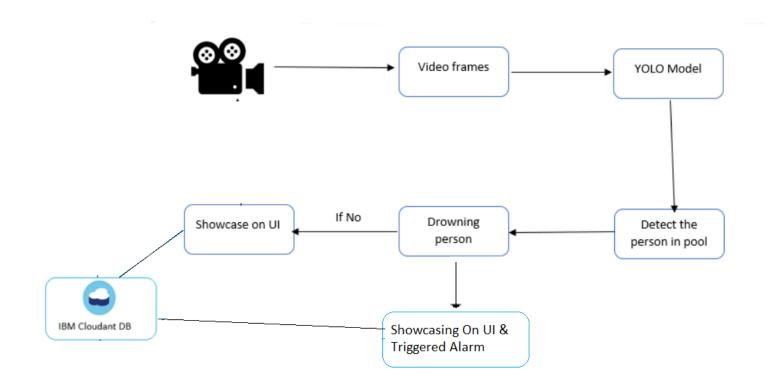| Date	03 October 2022
Team ID	PNT2022TMID32676
Project Name	Virtual eye - Lifeguard for swimming pools for active drowning
Maximum Marks	4 Marks

Technical Architecture:

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Web UI with Monitoring, Detection & Alert Features	HTML, CSS, JavaScript
2.	Application Logic	Frames → YOLO Model → Prediction Output	Python
3.	Database	Data Objects, Configurations etc.	NoSQL, etc.
4.	Cloud Database	Database Service on Cloud	IBM Cloudant
5.	File Storage	File storage requirements	IBM Block Storage or Other Storage Service or Local Filesystem
6.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: localhost Cloud Server Configuration : VM instance	Local, Cloud, VM, etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Flask, YOLO algorithm	Python
2.	Scalable Architecture	Client, Server, Cloud Database. (3-tier)	Docker, K8s
3.	Availability	High Availability when deployed on k8s	K8s