Project Design Phase II
Technology Stack (Architecture & Stack)

Date	01 NOVEMBER 2022
Project ID	PNT2022TMID51022
Project Name	Virtual Eye - Life Guard for Swimming Pools to Detect Active Drowning
Maximum Marks	4 Marks

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g. Web UI, Mobile App, Social media etc.	HTML, CSS, JavaScript / NodeJs etc.
2.	Application Logic-1	Data set design phase	Python
3.	Application Logic-2	Image extraction	Python-YOLO
4.	Application Logic-3	Object Detection	Python-Flask
5.	Database	Data Type, Configurations etc.	MySQL, NoSQL, etc.
6.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudant ,Open CV etc.
7.	File Storage	File storage requirements	IBM Block Storage or Other Storage Service or Local File system
8.	Deep Learning Model	Purpose of Deep Learning Model	Object Recognition Model ,CNN , YOLO, etc.
9.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration :	Local, Cloud Foundry etc.

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Technical Architecture Diagram:

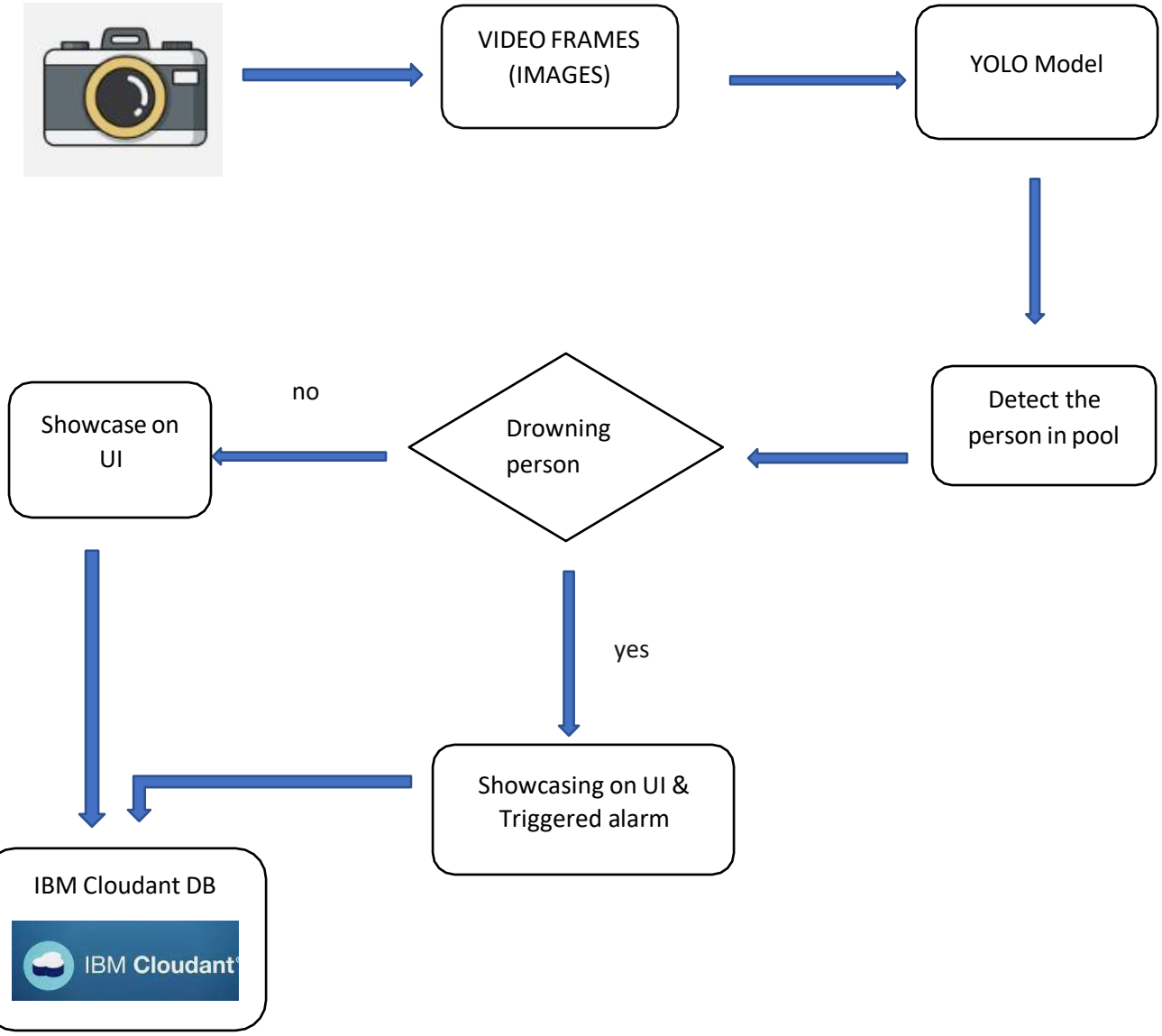

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Python(Anaconda) open source framework	Python
2.	Security Implementations	Camera Surveillances with security alarms	AI
3.	Scalable Architecture	3-tier Architecture	Python
4.	Availability	Camera available 24/7 when the swimmers are use the pool	AI
5.	Performance	Detect the drowning person when they are in helpless situation	Python