Project Design Phase-II

Technology Stack (Architecture & Stack)

Date	10 November 2022
Team ID	PNT2022TMID41486
Project Name	Virtual Eye - Life Guard for Swimming Pools to Detect Active Drowning
Maximum Marks	4 Marks

Technical Architecture:

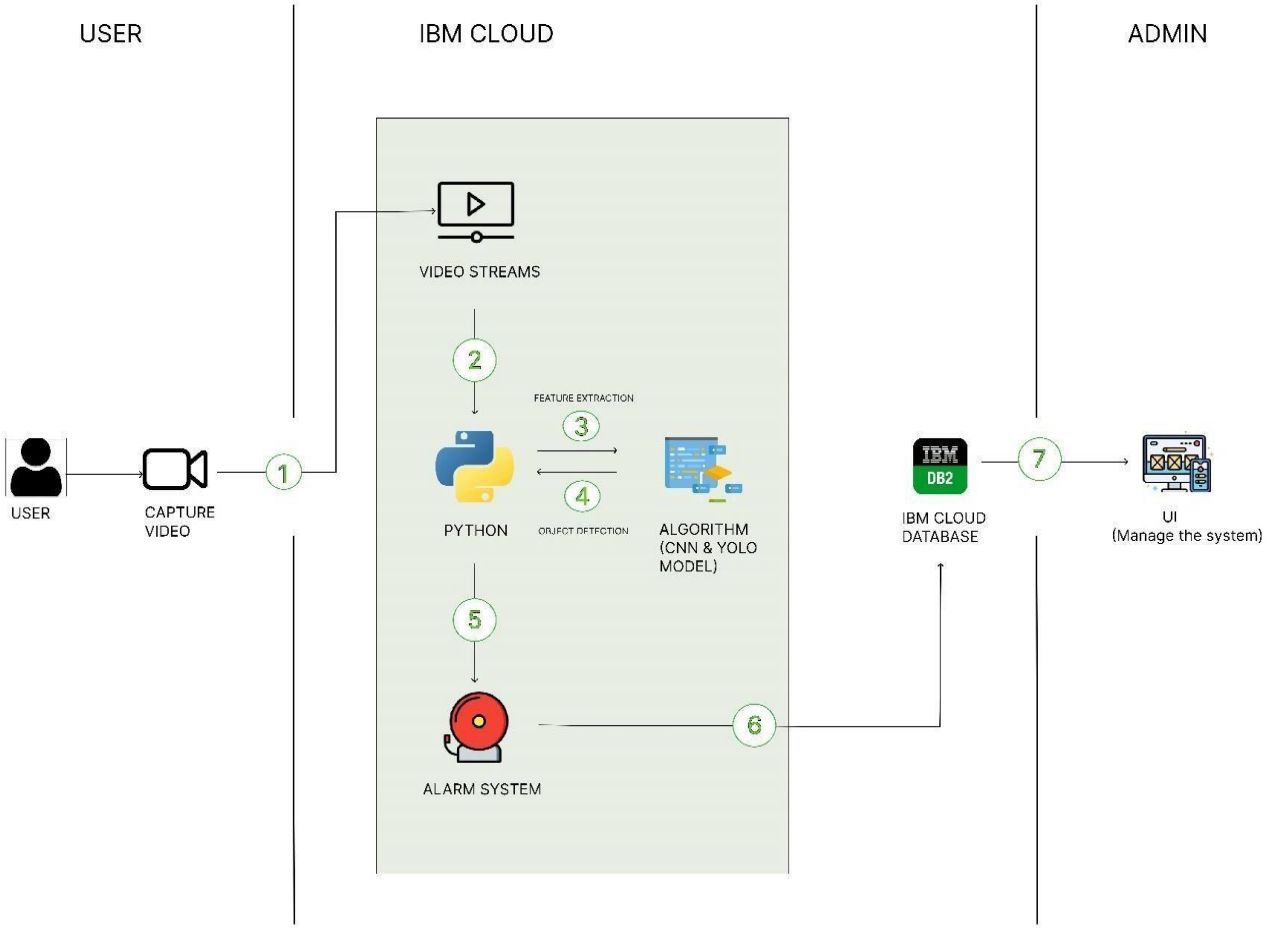

Table-1: Components & Technologies:

S. No	Component	Description	Technology
1.	User Interface	How user interacts with application	HTML, CSS, JavaScript / Angular Js / React Js etc.
2.	Application Logic-1	Pre-processing the model using datasets	Python
3.	Application Logic-2	Image extraction	Python
4.	Application Logic-3	Object detection	python
5.	Database	Data Type, Configurations etc.	MySQL, NoSQL, etc.
6.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudant etc.
7.	File Storage	File storage requirements	IBM Block Storage or Other Storage Service or Local Filesystem
8.	Deep Learning Model	Purpose of Deep Learning Model	Object Recognition Model, CNN etc. YOLOv7 model
9.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration:	Local, Cloud Foundry etc.,

Table-2: Application Characteristics:

S. No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Python (Anaconda) open-source frameworks used	python
2.	Security Implementations	Camera under pools	AI
3.	Scalable Architecture	3 – tier Architecture	Python
4.	Availability	All the time persons are under surveillance	AI
5.	Performance	Many persons in the swimming pool will be detected whether the person is drowning or not	Python