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

Team ID	**PNT2022TMID43878**
Project Name	**Project -** VirtualEye - Life Guard For Swimming Pools To Detect Active Drowning
Maximum Marks	**4 Marks**

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

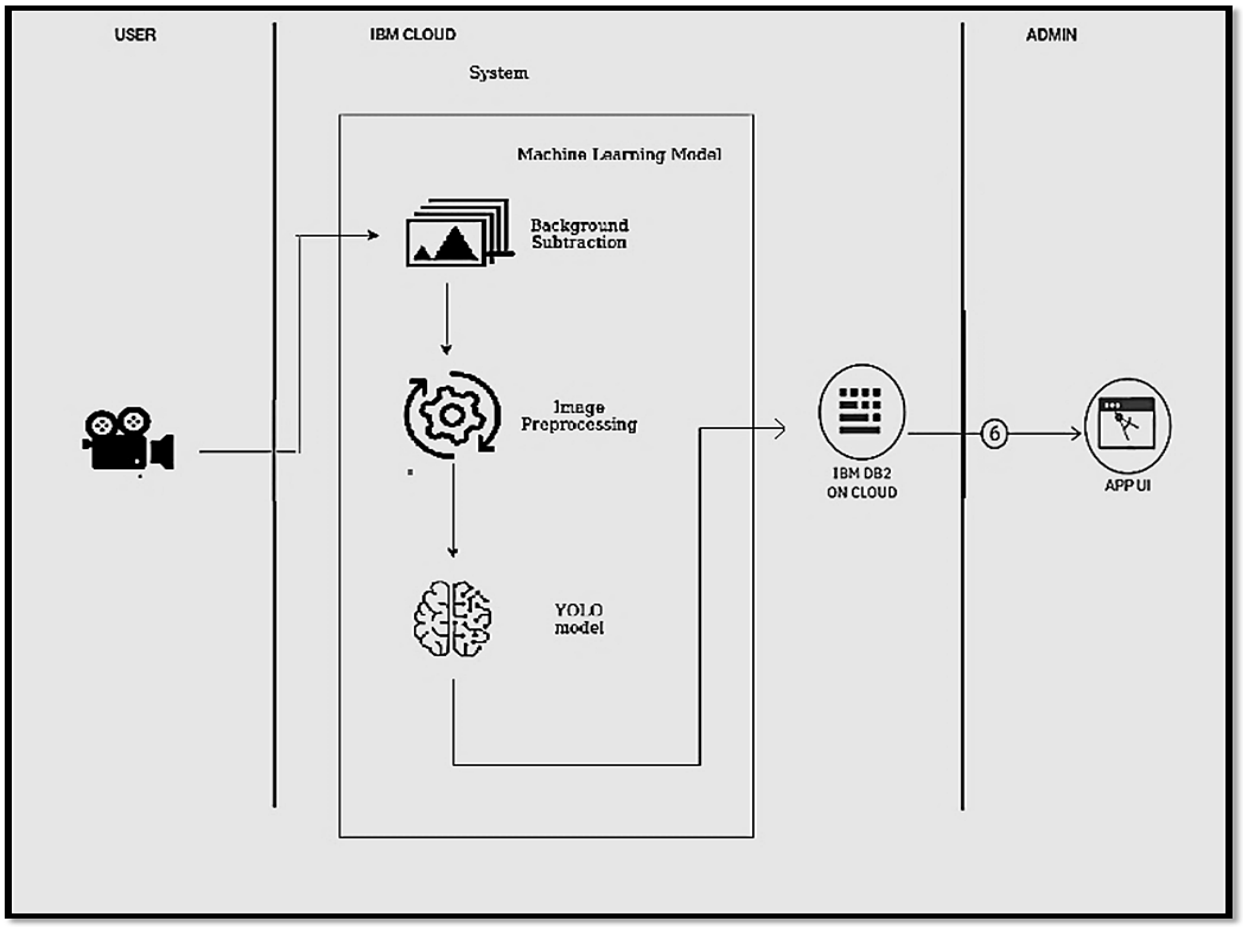

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Using WebUI, the admin interacts	HTML, CSS,
2.	Background Subtraction	Remove background information to focus on the subject.	Python
3.	Image preprocessing	putting filters on a picture to make it clearer.	OpenCV
4.	YOLO	To detect drowning, a pre-trained model with fine tuning is used.	Python, TensorFlow
5.	Cloud Database	Database Service on Cloud	IBM Cloudant etc
6.	External AP	the reason for using an external API in the application.	Local Filesystem
7.	Video Camera	Live updates from the pool.	Camera.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	TensorFlow,OpenCV2	Technology of Opensource framework
2.	Security Implementations	IBM Cloud Security Measures	e.g. SHA-256, Encryptions, IAM Controls, OWASP etc.
3.	Availability	Available at all times.	IBM Cloud Server
4.	Performance	Use of Cache to store frames	High performance cameras