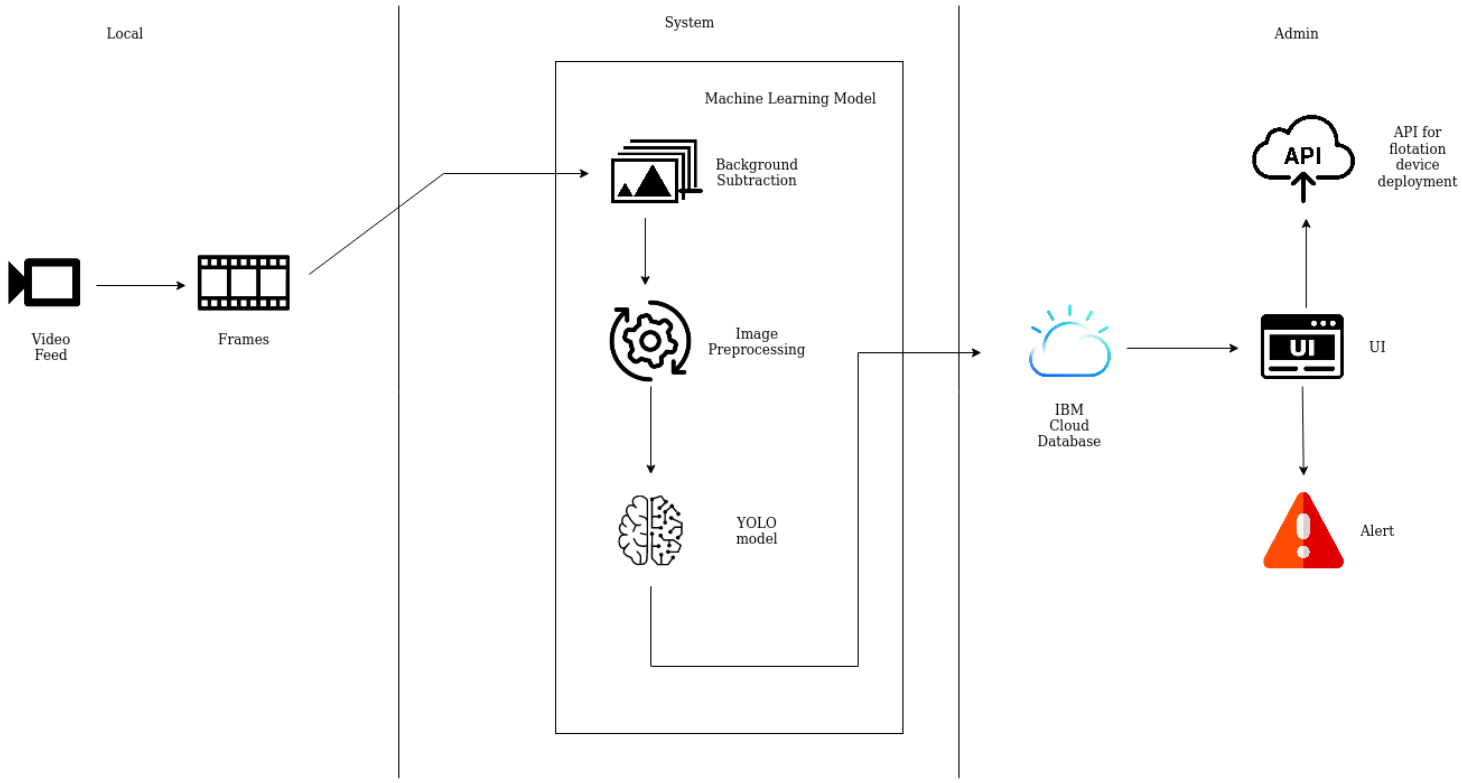
Project Design Phase-II

Technology Stack (Architecture & Stack)

Date	03 October 2022
Team ID	PNT2022TMID53114
Project Name	VirtualEye - Life Guard for Swimming Pools to Detect Active Drowning
Maximum Marks	4 Marks



S.No	Component	Description	Technology
1.	User Interface	Admin Interacts using WebUI	HTML, CSS, JavaScript
2.	Background Subtraction	Delete Background details to isolate subject	Python
3.	Image preprocessing	Using filters to obtain a clearer image	OpenCV
4.	YOLO	Pre trained model with fine tuning to detect drowning	Python, TensorFlow
5.	Cloud Database	Database Service on Cloud	IBM Cloudant
6.	External AP	Purpose of External API used in the application	Flotation Device Deployment API
7.	Video Camera	Live Feed of the Pool	Underwater Camera

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
8.	Open-Source Frameworks	TensorFlow,OpenCV2	Technology of Opensource framework
9.	Security Implementations	IBM Cloud Security Measures	e.g. SHA-256, Encryptions, IAM Controls, OWASP etc.
10.	Availability	Available at all times. Daemon Process running in the background	IBM Cloud Server
11.	Performance	Uses Cache to store frames	External RAM, High Performance Cameras