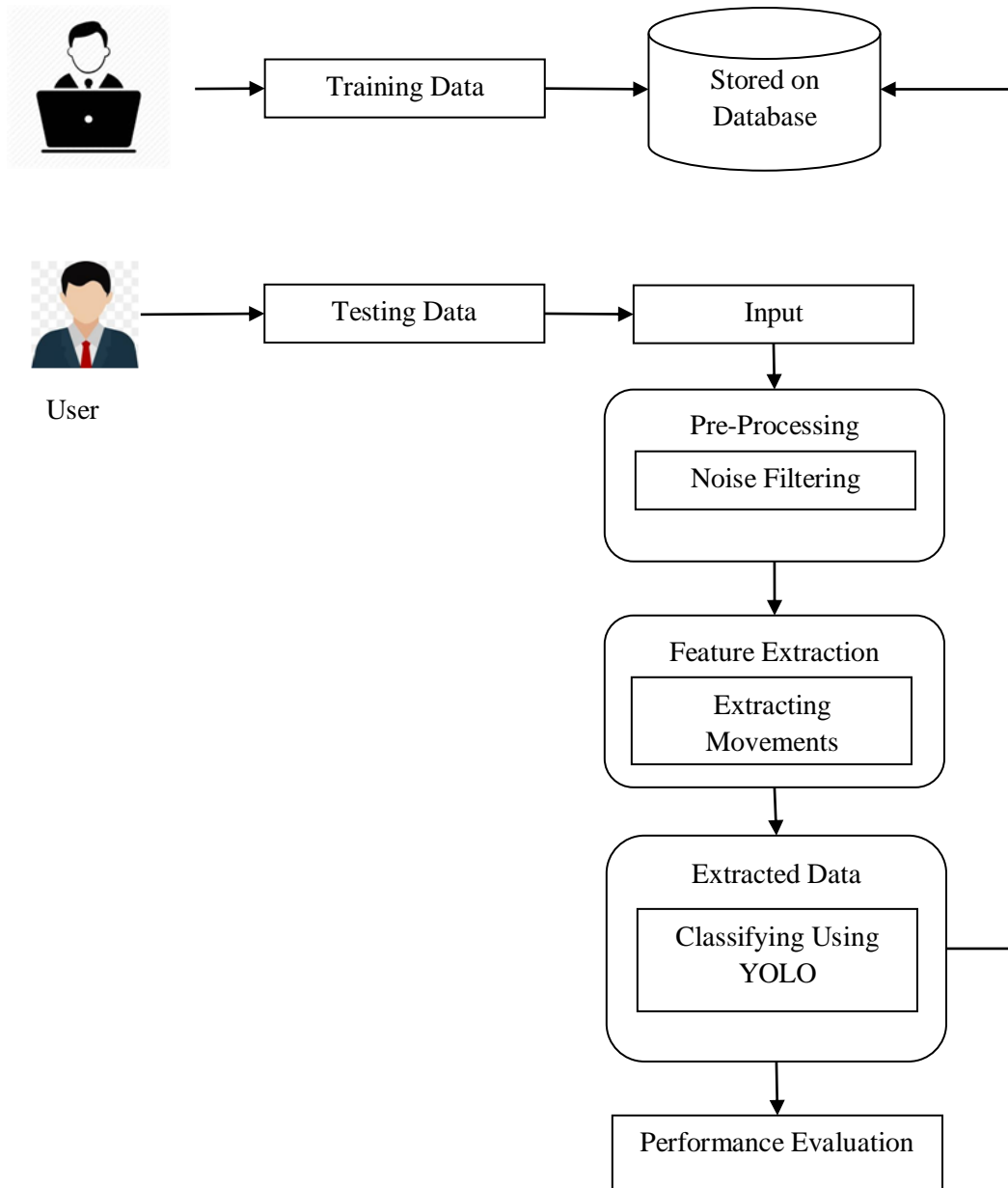# VIRTUAL EYE – LIFE GUARD FOR SWIMMING POOLS TO DETECT ACTIVE DROWNING

TECHNOLOGY STACK

COMPONENTS & TECHNOLOGIES

S.No	Component	Description	Technology
1.	User Interface	Web UI	HTML, CSS, JavaScript
2.	Application Logic-1	Logic for a process in the application	Python
3.	Application Logic-2	Logic for a process in the application	SMTP

4.	Application Logic-3	Logic for a process in the application	SMTP
5.	Database	Data Type, Configurations etc.	MySQL
6.	Cloud Database	Database Service on Cloud	Local host
7.	File Storage	File storage requirements	Local host
8.	External API-1	Purpose of External API used in the application	-
9.	External API-2	Purpose of External API used in the application	-
10.	Machine Learning Model	Purpose of Deep Learning Model	Classifies and detect the drowning with high accuracy
11.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration :	Local Server Configuration

APPLICATION CHARACTERISTICS

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	List the open-source frameworks used	PYCHARM
2.	Security Implementations	List all the security / access controls implemented, use of firewalls etc.	-
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	Able to respond the changes in an application
4.	Availability	Justify the availability of application (e.g. use of load balancers, distributed servers etc.)	The system must always be functional
5.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	Takes no longer time to response