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

Date	03October 2022
Team ID	PNT2022TMID23264
Project Name	Efficient Water Quality Analysis And Prediction Using Machine Learning
Maximum Marks	4 Marks

Technical Architecture:

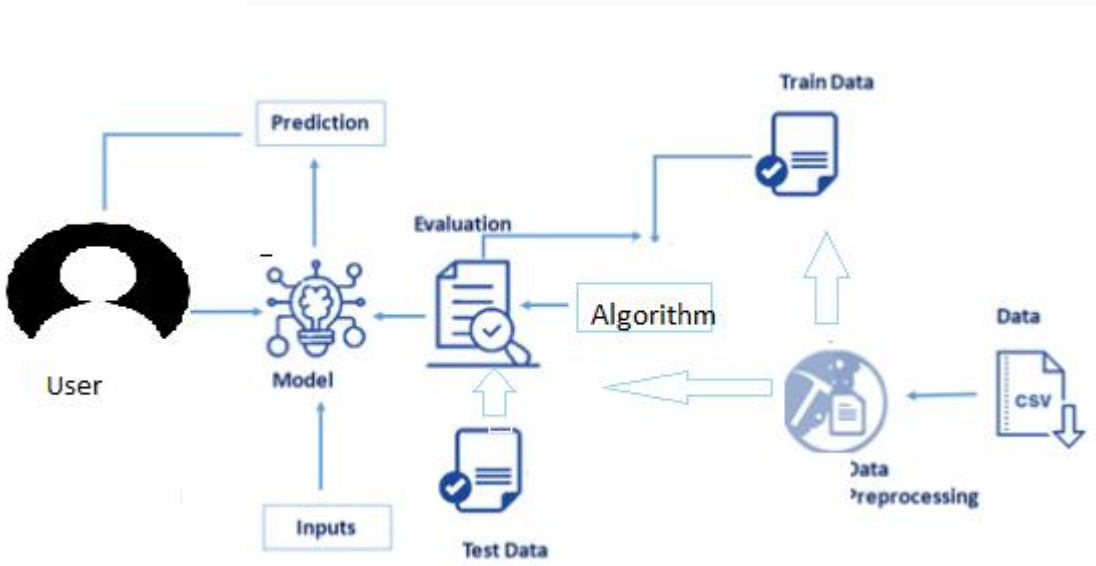

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Web UI	HTML, CSS, JavaScript
2.	Application Logic-1	Logic for application development	Java / Python
3.	Database	Managing the records	MySQL, NoSQL, etc.
4.	Cloud Database	Storing the records	IBM DB2, IBM Cloudant etc.
5.	File Storage	File storage requirements	IBM Block Storage or Other Storage Service or Local Filesystem
6.	Machine Learning Model	Model development	Supervised Machine learning model
7.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration :	Local, Cloud Foundry, Kubernetes, etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Web2Py is platform-independent, which means that it can run on all the popular operating systems. Furthermore, it simplifies the web application development process through its own web-based IDE that includes a code editor, a debugger, and one-click deployment.Flask is a micro-framework for Python. It is lightweight and easily adaptable to suit a developer's needs.	FLASK, Web2Py
2.	Security Implementations	SHA-256 stands for Secure Hash Algorithm 256-bit and it's used for cryptographic security. Cryptographic hash algorithms produce	e.g. SHA-256

S.No	Characteristics	Description	Technology
		irreversible and unique hashes. The larger the number of possible hashes, the smaller the chance that two values will create the same hash.	
3.	Scalable Architecture	SaaS	IBM Cloud
4.	Availability	The application will be available in any web engine result as a website.	GIT Lab