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

Date	15 October 2022
Team ID	PNT2022TMID49528
Project Name	Efficient Water Quality Analysis and Prediction Using Machine Learning
Maximum Marks	4 Marks

Technical Architecture:

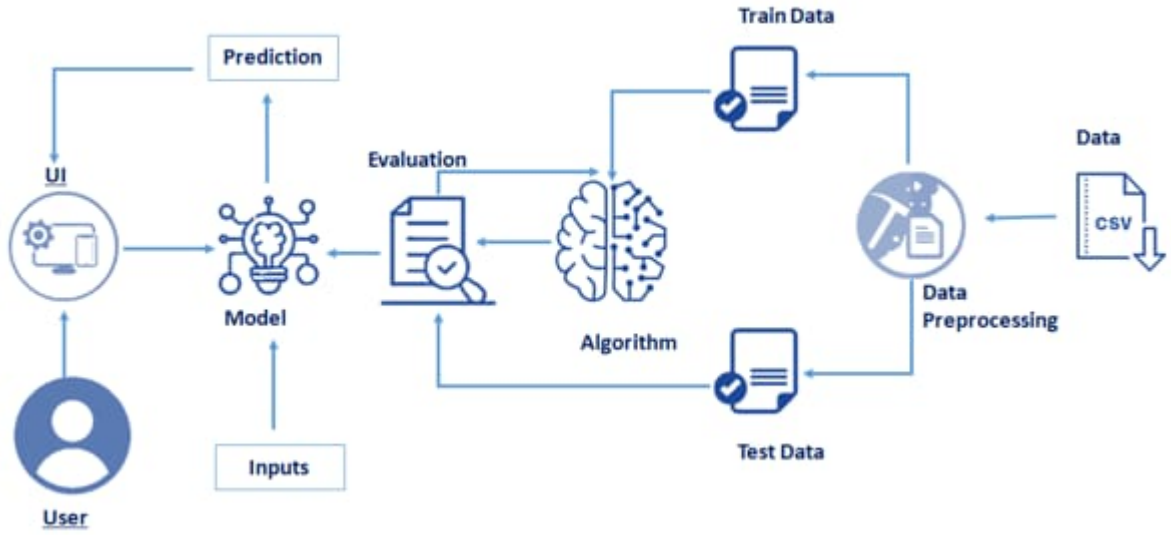

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g. normal message with mobile phone	TCP,SMPP protocol
2.	Application Logic-1	Logic for a process in the application	Python
3	Data collection	Data can be collected	Internet application
3.	Dataset	Dataset can be used for training and testing the model	IBM cloud
4.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloud
5.	File Storage	Store the information	IBM cloud storage or local file system
6.	Machine Learning Model	Purpose of Machine Learning Model	Analyse and prediction the model
7.	Infrastructure (Server / Cloud)	Application Deployment cloud & service configuration	Cloud Foundry
8	mobile notification	The purpose of notification is to information the water quality analysis & prediction	Notification will be shown in communication device e.g.mobile phone

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	List the open-source frameworks used	WASP(Wireless application service provider)
2.	Security Implementations	To ensure that the access of safe drinking water for all people in a country	SHA-256, Encryptions
3.	Scalable Architecture	High mineral levels are found in water as well as Water Quality Index (WQI) and Water Quality Classification (WQC) are accurately predicted.	SWQAT (Surface water quality assessment tool), DTT(Digital Twin Technology)
4.	Availability	This system is available for every family or any part of the area people.	DTT(Digital Twin Technology)
5.	Performance	System effectively compare the incoming water quality parameters with the required dataset and send the message	GSM technology