Project Design Phase-I
Proposed Solution Template

Date	19 September 2022
Team ID	PNT2022TMID54402
Project Name	Efficient water quality analysis and prediction using machine learning
Maximum Marks	2 Marks

S. No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Water becomes the most precious natural resource and only some part of the water is usable on the surface of the earth. So, it is necessary to analyze and predict the quality of water to detect the impurities present in the water that can cause a severe effect on human health and the environment.
2.	Idea / Solution description	A designed web application that provides an interface to accept the water parameter as input from the user. In continuation using a machine learning algorithm that helps to predict the water quality index which denotes the purity of the water.
3.	Novelty / Uniqueness	Using a supervised machine learning technique for effective prediction and analysis of water quality is very cost-efficient compared to lab analysis.
4.	Social Impact / Customer Satisfaction	As most people are concerned about the quality of the water they drink. So, this water quality analysis will help to prevent water-borne diseases as water plays a vital role in human lives. The proposed solution will help us to validate the water pollution and will provide pure quality water.
5.	Business Model (Revenue Model)	Industries that provide sanitation facilities and products like water purifiers, quality testers, etc... can deploy this solution which helps to provide a better insight into health concerns and there may also be an increase in awareness and demand for water quality testing and availability.
6.	Scalability of the Solution	This proposed solution will be implemented where anyone with internet service can access the web application and has no specific requirement for software and hardware component.