Project Design Phase-I
Proposed Solution Template

Date	19 September 2022
Team ID	PNT2022TMID51670
Project Name	Efficient Water Quality Analysis And Pediction using Machine Learning
Maximum Marks	2 Marks

Proposed Solution Template:

Project team shall fill the following information in proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Due to the fast growing urbanization supply of safe drinking water is a challenge for the every urban areas. They get water from sources like their own well, from municipal through pipes, pumps etc. Many of them use simple water purifier to make the water safe to drink. But it does not purifies the entire water. There will be small chemical particles the may cause diseases. So we need an water quality predicting system that will predict the correct quality of water.
2.	Idea / Solution description	To make our water safe to drink, we are developing a model that will predict the water quality accurately using water quality standard indicators like pH, Turbidity, Alkalinity, Nitrate, Hardness etc.
3.	Novelty / Uniqueness	Predicting accurate value. Better that tester kit.
4.	Social Impact / Customer Satisfaction	Customer satisfaction is an important goal. To meet this goal ,it is necessary to use an evaluation model for measuring the customer satisfaction level. Some important criteria such as, water quality,responsibility of municipal etc. are distinguished and used in the proposed model.To integrate all of these criteria in a unit index, the Analytic Hierarchy Process (AHP) technique is used.
5.	Business Model (Revenue Model)	Water is one of the essential component of human living.Checking the water is safe to drink or not can help us to know whether we can drink or not.Avoiding drinking unsafe water can reduce water-borne diseases like typhoid,diarrhoea etc.
6.	Scalability of the Solution	We can use reverse osmosis method. Reverse Osmosis works by using a high pressure pump to increase the pressure on the salt side of the RO and force the water across the

		semi-permeable RO membrane, leaving almost all (around 95% to 99%) of dissolved salts behind in the reject stream. The amount of pressure required depends on the salt concentration of the feed water. The more concentrated the feed water, the more pressure is required to overcome the osmotic pressure.