

**Project Design Phase-I**  
**Proposed Solution Template**

Date	24 September 2022
Team ID	PNT2022TMID49117
Project Name	Efficient of water quality analysis and prediction 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 city authority. Water can be polluted any time. So the water we reserved in the water tank at our roof top or basement in our society or apartment may not be safe. Still in India most of the people use simple water purifier that is not enough to get surety of pure water. Sometimes the water has dangerous particles or chemical mixed and general purpose water purifier cannot purify that. And it's impossible to check the quality of water manually in every time. So an automatic real-time monitoring system is required to monitor the health of the water reserved in our water tank of the society or apartment. So it can warn us automatically if there is any problem with the reserved water.
2.	Idea / Solution description	In this technique, our model predicts that the water is safe to drink or not using some parameters like Ph value, conductivity, hardness, etc. Access to safe drinking-water is essential to health, a basic human right and a component of effective policy for health protection.
3.	Novelty / Uniqueness	Warning when to change the filter.  Detecting salt value.
4.	Social Impact / Customer Satisfaction	Customer satisfaction is an important goal in total quality management. In order to meet this goal, it is necessary to use on evaluation model for measuring the customer satisfaction level in a water supply domain. Some important criteria

		such as water quality, responsibility of the company, etc. are distinguished and used in the proposed model. To integrate all of these criteria in a unit index, the analytic hierarchy process technique is used.
5.	Business Model (Revenue Model)	Water is one of the essential component for human living. Water quality has a direct impact o public health and the environment. Water quality models have different information, but generally have the same purpose, which is to provide evidentiary support of water issues. Understand the material needs. Apply for carbon finance.
6.	Scalability of the Solution	The most common treatment for reducing scale formation is to <b>“soften” the water</b> . “Softening” is a process where calcium and magnesium in the water are exchanged with sodium. Commercial softeners are available either through a plumbing Equipment supplier or a water treatment professional.