Project Design Phase-I
Proposed Solution

Date	19 September 2022
Team ID	PNT2022TMID08566
Project Name	Project – Efficient Water Quality Analysis and Prediction using Machine Learning
Maximum Marks	2 Marks

Proposed Solution:

Project team shall fill the following information in proposed solution.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Water is an essential need for survival and the water should be hygienic. So, a new system is proposed to analyse the quality of water based on pH, conductivity, hardness, turbidity, coliform using machine learning algorithms.
2.	Idea / Solution description	Machine learning algorithms are used to classify the quality of water based on the water quality index.
3.	Novelty / Uniqueness	An application is created where user can enter the parameters and the application predicts the solution based on the inputs and the algorithm used is random forest.
4.	Social Impact / Customer Satisfaction	Analysis and prediction of the water quality may reduce the risk of water pollution and will provide a safe drinking water in urban places
5.	Business Model (Revenue Model)	The application build will provide with the accurate values and will classify the water appropriately. The errors calculated are appropriate.
6.	Scalability of the Solution	Since the model is based on Random Forest the accuracy is high and mean squared error is low. The model first calculates the value of the water with the parameters and then the water quality is classified