Project Design Phase-I
Proposed Solution Template

Date	19 September 2022
Team ID	PNT2022TMID23264
Project Name	Efficient Water Quality Analysis &Prediction using Machine Learning
Maximum Marks	2 Marks

Proposed Solution Template:

S.No.	Parameter	Description
1.	Problem Statement	To calculate the Water Quality Index of the water and predicting whetherthe waterways arehealthy and its in sufficient quality to meet their designated uses such as drinking, farming,washing.The Water Quality is calculated by the turbidity, nutrients, dissolved salts, dissolvedoxygen and pH.As water is recycled through the earth, it picks up many things along its path.Water quality will vary from place to place, with the seasons, and withthe various kinds ofrock and soil it moves through.
2.	Idea / Solution description	With the Support Vector Machines (SVM), Neural Networks (NN), Deep Neural Networks (Deep NN) and k Nearest Neighbours (kNN), we estimate the water quality using turbidity, D.O, conductivity, nitrate content, pH and temperature.
3.	Novelty / Uniqueness	With the Quality index of water, the effective purpose can be easily defined. And with periodic measure, we know how effective the water pollution is treated.
4.	Social Impact / Customer Satisfaction	We increase the quality of people lives and economic growth. Prevention of the waterborne diseases. Based on the water quality we can use the water accordingly.

5.	Business Model (Revenue Model)	With this model, we can evaluate the quality and major purpose of water based on the quality of water.
6.	Scalability of the Solution	The water quality index is changed in response to change in climate, land use and management practices. By setting the criteria for water quality index calculation, we can overcome this issue.