Project Design Phase-I
Proposed Solution

Date	25 September 2022
Team ID	PNT2022TMID19759
Project Name	Efficient Water Quality Analysis and Prediction using Machine Learning
Team Leader	Monish R
Team Members	Puviyarasu S, Ramya v, Subasri S
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)**	Efficient Water Quality Analysis and Prediction using Machine Learning.
2.	**Idea / Solution description**	For the WQI prediction, artificial neural network models, namely nonlinear autoregressive neural network (NARNET) and long short-term memory (LSTM) deep learning algorithm, have been developed. In addition, three machine learning algorithms, namely, support vector machine (SVM), K-nearest neighbour (K-NN), and Naive Bayes, have been used for the WQC forecasting. The used dataset has 7 significant parameters, and the developed models were evaluated based on some statistical parameters
3.	**Novelty / Uniqueness**	In previous they find water quality with help of WQI and WQC. Now the solution is find with help of advanced artificial intelligence and it include seven Parameters
4.	**Social Impact / Customer Satisfaction**	During the last years, water quality has been threatened by various pollutants. Therefore, modelling and predicting water quality have become very important in controlling water pollution. In this work, advanced artificial intelligence (AI) algorithms are developed to predict water quality index (WQI) and water quality classification (WQC).This is the impact of this statement.

5.	**Business Model (Revenue Model)**	The revenue stream include the Promoted trends and method. Technology and production is improved in business side. It increased the profit and also the logistic way.
6.	**Scalability of the Solution**	Scalability of this solution can handle any amount of data and perform many computations in a cost effective and time saving to instantly serve millions of users residing at global location.