

Project Design Phase-I
Proposed Solution Template

Date	19 September 2022
Team ID	PNT2022TMID17967
Project Name	Project – Efficient Water Quality Analysis and Prediction using Machine Learning
Maximum Marks	2 Marks

Proposed Solution Template:

The project team shall fill in the following information in the proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Predicting the urban water quality is a challenging task since the water quality varies in urban spaces non-linearly and depends on multiple factors, such as meteorology, water usage patterns, and land uses, so this project aims at building a Machine Learning (ML) model to Predict Water Quality by considering all water quality standard indicators.
2.	Idea / Solution description	A web application is designed to get water parameters and analyze them based on the model generated using machine learning and the quality of water is analyzed and displayed to the user.
3.	Novelty / Uniqueness	The model is built by Stacking classifier algorithms above meta classifier which helps to improve the prediction accuracy.
4.	Social Impact / Customer Satisfaction	The application built helps to ensure whether the water consumed by the customer, satisfies the requirements of the water quality index as provided by World Health Organization(WHO).
5.	Business Model (Revenue Model)	The application is to be used by common people. Therefore, the incorporation of advertisements is a source of revenue.
6.	Scalability of the Solution	The built application may also be used to train larger datasets, thereby enabling it to be used for industrial purposes.