SOLUTION REQUIREMENT

(FUNCTIONAL & NON FUNCTIONAL)

Functional Requirements:

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	Checking the quality of the water	Patient dataset such as Temperature, PH, Conductivity, B.O.D, Nitratenan, Fecal Coliform, Total Coliform, Year etc.
FR-2	Predicting water quality using Algorithms	Machine learning
FR-3	Accessing datasets	Datasets are collected by data preprocessing method.
FR-4	Classification of algorithm	KNN ,SVM, ANN, Navis bayes
FR-5	Building and training the system	In this phase, we split the dataset into training and test dataset , and then trained the models using training dataset
FR- 6	Testing the model	In this phase, we tested the accuracy of the models with the test dataset that was formed in previous phase and the most accurate model is figured out.

Non-functional Requirements:

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	We can predict the water quality & predicting as early. It is useful to all types of people.
NFR-2	**Security**	We have designed this project to secure the people from drinking the impurity water.
NFR-3	**Reliability**	This project will help everyone in protecting their health. Accurate water quality prediction is the basis of water environment management and is of great significance for water environment protection.
NFR-4	**Performance**	This system uses different sensors for monitoring the water quality by determine pH,Turbidity,conductivity and temperature. The data preprocessing access the dataset. With the use of this we predict the quality water
NFR-5	**Availability**	By developing and deploying resilient hardware and software we can analyze the drinking water .
NFR-6	**Scalability**	This project used to measure and determine the quality of water. This provide pollution free and purified water.