Ideation Phase
Problem Statements

Date	19-09-2022
Team ID	PNT2022TMID35567
Project Name	Efficient water quality analysis and prediction using Machine Learning

Problem Statement:

The quality of water is a major concern for people living in urban areas. The quality of water serves as a powerful environmental determinant and a foundation for the prevention and control of waterborne diseases. However, 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.

I am	I'm trying to	But	Because	Which makes me feel
People who taking water from unprotected wells and springs,untreated surface water from lakes, ponds. people who living in low-income usually have less access to improved sources of drinking-water	Get good quality water by analyzing the quality of water and checks whether it is contaminated or pure water.	Microbial contamination,climate change,economic issues, increasing water scarcity, population growth, demographic changes and urbanization are the facing challenges.	Inadequate management of urban, industrial and agricultural wastewater means the drinking-water of hundreds of millions of people is dangerously contaminated or chemically polluted.	To get a good quality water in order to avoid water transmitted diseases such as diarrhoea, cholera,etc

Problem Statement (PS)	I am (Customer)	I'm trying to	But	Because	Which makes me feel
PS-1	people who were taking water from unprotected wells and springs. People who were collecting untreated surface water from lakes, ponds, rivers and streams. people who were living in low-income, informal or illegal settlements usually have less access to improved sources of drinking-water than other residents.	Get good quality water by analyzing the quality of water and checks whether it is contaminated or pure water.	Microbial contamination,climate change,economic issues, increasing water scarcity, population growth, demographic changes and urbanization are the facing challenges.	Inadequate management of urban, industrial and agricultural wastewater means the drinking-water of hundreds of millions of people is dangerously contaminated or chemically polluted. Natural presence of chemicals, particularly in groundwater, can also be of health significance, including arsenic and fluoride, while other chemicals, such as lead, may be elevated in drinking-water as a result of leaching from water supply components in contact with drinking-water.	To get a good quality water in order to avoid water transmitted diseases such as diarrhoea, cholera, dysentery, typhoid and polio and is estimated to cause 485000 diarrhoeal deaths each year from a contaminated water due to some chemicals arise from arsenic, fluoride or nitrate, emerging contaminants such as pharmaceuticals, pesticides, per- and polyfluoroalkyl substances (PFASs) and microplastics generate public concern.