**Efficient Water Quality Analysis & Prediction Using Machine Learning**

**PROBLEM STATEMENT:**

Water is considered as a vital resource that affects various aspects of human health and lives. 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.

**APPROACHES:**

To measure various chemical and physical properties of water like pH, temperature and particle density of water using sensors.

● Send the data collected to a Raspberry Pi, show the data in display and send it to a cloud based Database using Wired/Wireless Channel.

● Trigger alarm when any discrepancies are found in the water quality.

● Data visualization and analysis using cloud based visualization tools.

**BENEFITS:**

In this technique, our model predicts that the water is safe to drink or not using some parameters like Ph value, conductivity, hardness, etc.

Access to safe drinking-water is essential to health, a basic human right and a component of effective policy for health protection