LITERATURE SURVEY ON EFFICIENT WATER QUALITY ANALYSIS AND PREDICTION

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PROBLEM DESCRIPITON:

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. so this project aims at building a Machine Learning model to Predict Water Quality by considering all water quality standard indicators.

RELEVANT BASE PAPERS:

TITLE	MECHANISM USED	ADVANTAGES	DISADVANTAGES
Paper 1: Water Quality Analysis Using AI	Selection of parameters, Selection of methods, Sampling,Labeling , Preservation	It protect state waters for the ways that we want and need to use them	There is no continuous and remote monitoring
Paper 2: Water Quality Prediction Using Machine Learning	• pH • Hardness • Sulphate • Conductivity • Turbidity	Protecting human health and avoid the costs related to medical care	Difficult to manage over time and with large data sets
Paper 3: Water Quality Prediction Using Supervised learning	Water Quality Index Calculation, Data Preprocessing	Reducing expensive and time-consuming lab analysis	Considerable time/effort required to run complete sample analysis

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.