Project Design Phase-I
Assessing the safety of Municipal drinking water

Date	06 May 2023
Team ID	NM2023TMID19072
Project Name	Assessing the safety of municipal drinking water

Assessing the safety of municipal drinking water Architecture:

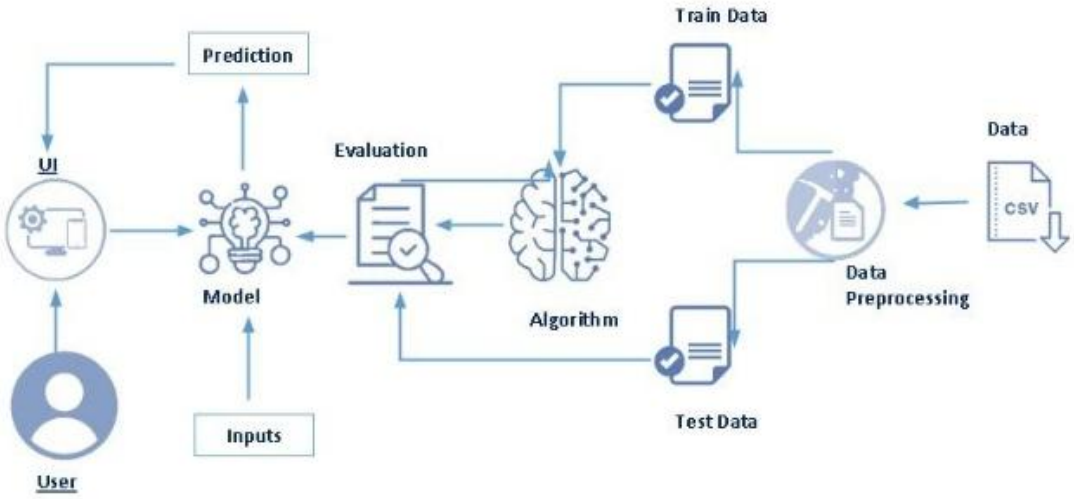
Water quality is a critical issue that affects both human health and the environment. Our project aims to assess water quality in a specific region by examining various physical, chemical and biological parameters. We have collected water samples from different locations and measured parameters such as pH, Hardness, dissolved solids, chloramines, conductivity, sulfates, organic carbon, trihalomethanes, turbidity and potability.

Companies can develop and market products such as water filters, purifiers and treatment systems that can improve the quality of water for households, institutions and communities. Businesses can design and install systems that capture, treat and reuse wastewater, reducing the amount of water that is withdrawn from natural sources and helping to conserve water resources.

Access to clean and safe water is a basic human right and has significant social impacts. Poor water quality can lead to waterborne diseases, which can spread quickly and cause illness. Lack of access to clean water can also limit economic growth and development. Addressing water quality and ensuring access to safe water is crucial for promoting public health, reducing poverty and supporting sustainable development.

We will be using classification algorithms such as Logistic Regression, Decision tree, Random forest, KNN, and Xgboost. We will train and test the data with these algorithms. From this best model is selected and saved in pkl format. We will be doing flask integration and IBM deployment.

Technical architecture:


Train Data
Prediction
Data
UI
Evaluation
CSV
Data
Preprocessing
Model
Algorithm
Test Data
Inputs
User