**Phase III- Water Quality Analysis**

**Introduction**

Water quality is a crucial factor for human health and well-being, as well as for the environment and the economy. This project addresses the critical issue of water quality analysis, as it pertains to health, human rights, and broader public policy considerations. Access to safe drinking water is indispensable, with significant implications for health and economic well-being. This analysis focuses on a comprehensive water quality dataset comprising 3276 water bodies, encompassing various critical parameters.

**Data Acquisition and Preprocessing**

The initial phase of the project is dedicated to data preparation and exploratory data analysis (EDA). To initiate this process, we acquire the water quality dataset and preprocess it. This preprocessing encompasses the handling of missing values and outliers, ensuring data integrity and reliability.

**Exploratory Data Analysis (EDA)** is an approach to data analysis that aims to summarize the main characteristics of a dataset, often with the help of data visualization and summary statistics.

Subsequently, our EDA endeavours encompass the visualization of parameter distributions, correlation analyses, and the identification of potential deviations from established water quality standards. This stage serves as the foundation for a more in-depth and robust water quality assessment, enabling data-driven insights and informed policy decisions.

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