**Using neural networks to analyse water quality from remote sensing data and raise public awareness through web development**

Abstract:

Water quality characteristics can be monitored using remote sensing techniques. Geographic information systems use remote sensing photos as well as the results of imaging analysis as major data sources like GIS and LANDSAT-8. Remote sensing enables the simultaneous viewing and mapping of vast areas of the earth's surface when used in conjunction with field surveys. The use of remote sensing for weather forecasting is common in India. Additionally, it is employed to warn people of impending cyclones. It can be used to look into issues like eutrophication of large bodies of water, oil spills from oil tankers, desertification, air pollution, land degradation, and deforestation. Our issue is the study of water quality using landsat-8 pictures. Artificial intelligence (AI) approaches such as MLP, SVM, and group method of data management were previously used to forecast the components of water quality (GMDH). A csv file with the data was selected. The best accuracy was connected to the RBD as the kernel function, according to a review of the SVM's structure. The outcomes showed that its precision is sufficient for practical uses. The GMDH model had the lowest level of accuracy. Our proposed system uses artificial neural networks, such as the Artificial Neural Network (ANN), to determine the water quality in Vijayawada, our local area, utilising remote sensing data. To achieve a successful result, we select the algorithms that have multilayer perceptron’s. Additionally, utilising web technologies and frameworks, we create a website that will provide weekly updates on the water quality in a specific location. The individuals who live close to those water bodies would become more conscious as a result. The areas that will profit from this project are those that are close to water bodies, and those who live there will also be made aware of the problem of water contamination.