System to Improve the Quality of Water Resources in Sri Lanka Using Machine Learning and Image Processing

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Abstract

Water covers approximately 71% of the earth's surface, but only 1.2% of it can be used for drinking. However, due to the amount of waste water released into water resources, the presence of harmful microorganisms, and natural occurrences such as eutrophication, even that water cannot be used directly for drinking purposes without purification. One method of purifying water is chlorination. However, if the chlorine level exceeds the standard, it can cause both long-term and short-term illnesses. As a result, a system is imposed to solve four problems: predicting the pH value of chlorinated drinking water, determining the quantification value of active sludge in a wastewater plant, detecting microorganisms in drinking water, and predicting the percentage of eutrophication in a water resource.

Keywords

Drinking Water, Waste Water, Ph, Microorganisms, Eutrophication