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Water Quality Analysis and Prediction using Machine Learning

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Abstract: *Water quality analysis is essential for ensuring safe drinking water and environmental sustainability. This paper explores the use of the Vector Space Model (VSM) algorithm to predict and classify water quality based on various physicochemical parameters. The study includes data preprocessing, feature selection, and model training to achieve accurate classification. The results indicate that VSM provides efficient and reliable water quality classification compared to traditional methods. The findings of this study can contribute to developing an early warning system for water pollution detection, helping authorities take timely corrective actions.*

Keywords: Water Quality, Machine Learning, VSM Algorithm, Prediction, Classification.