

ABSTRACT

The longest river in West Java, the Citarum River, is 323 km long and flows from Situ Cisanti in Bandung Regency to the Java Sea. The river has an important role in the ecosystem and the lives of local communities. In 2018, it was named the dirtiest river in the world. This condition causes many serious environmental and health problems that affect the lives of the surrounding community. The community certainly does not know whether the river water quality is lightly polluted, moderately polluted, or heavily polluted.

To solve the problem of how polluted the water quality of the Citarum River is, we can use a branch of Machine Learning called Supervised Learning. There are 3 Machine Learning Models that we use to determine the water quality of the Citarum River, namely Artificial Neural Network, Gaussian Naive Bayes, and K-Nearest Neighbor with Euclidean Distance. Later, the classification results are displayed on a website equipped with an interactive map and manual calculator to show how polluted the Citarum River flow is at several points.

From the results of the research we have done, it is found that Weighted KNN with Euclidean Distance gets an accuracy of 97.3% higher than the other two models. These results are displayed in our website called Citasi (Citarum Quality Water Classification). With this website, people can easily find out the water quality of the Citarum River at several points of the river.

Keywords: *River Water Quality, Machine Learning, Website*