

## ABSTRACT

Coral reef ecosystems are home for fish and other types of biota in the sea to find food and breed. Because of the diversity of coral reefs needed in this ecosystem, humans can make the best use of it. The classification of coral reef ecosystems is used to assist humans in preserving or utilizing existing ecosystems. In this classification, several conditions on coral reefs and around coral reefs are taken to be the basis of research.

This research aims to create a coral reef ecosystem classification system that is based on the use and performance of methods that will produce classification results and accuracy of the K-Nearest Neighbor classification. Samples of coral reef ecosystem data are taken from several factors that have been processed into percentage data at a station. Factors that affect coral reef ecosystems that are used as input to the classification so as to obtain results that are supported by ecosystems for research, research, and expansion

Testing using the K-Nearest Neighbor method based of coral reef ecosystems have an accuracy value that reaches 91%.

**Keywords:** *Coral Reef, Classification, K-Nearest Neighbor*