

Abstract

Waves are a serious problem for merchant ships and offshore structures. If not handled properly it can cause big losses. Therefore we need a system to predict waves. There are already several methods to predict waves, one of which is the SWAN model. However, SWAN has a heavy computational burden. As an alternative, a wave prediction system using machine learning is made. To facilitate research using machine learning, the authors use an application with a Graphic User Interface (GUI). This application can be used to enter a dataset and select a machine learning method to use. For machine learning methods used are General Regression Neural Network (GRNN) and Support Vector Regression (SVR). Meanwhile, the case study used is the dataset in Jakarta Bay. The results of the experiments carried out got satisfactory results.

Keywords: Wave, SWAN, GRNN, SVR