Abstract

   Tides are phenomenon that occurs to sea due to the movement of up and down positions of the surface of the sea waters periodically by the gravitational force of the moon and other planets. Tides are very important to the needs of residents that make a living such as fishing, salt making, water transportation, and activities at the port. The rise or fall of the surface of the sea waters causes friction in particles of water mass from the surface to the shallow sea floor. One tide measurement tool is a tide gauge of the Sea Level Station Monitoring Facility. This tool has a sensor that can measure the sea level which is then recorded into a computer. This study conducted tidal predictions in Pangandaran using the Nonlinear Autoregressive Neural Network with 3 months of data onto October to December in 2015 obtained from the Sea Level Station Monitoring Facility. These results are input for analysis which affects the number of prediction days on the accuracy and influence of the number of days used as training inputs on accuracy with a minimum error rate.

Keywords: tides, prediction, accuracy, *nonlinear autoregressive*, *artificial neural network*, *tide gauge*.