ABSTRACT

Flood is one of the common types of natural disaster in Indonesia, we need a system that can predict the arrival of the flood is important for the Indonesian people, especially people who live a certain area of the river flow. Some parameters that can be used to predict the flood are water level and rainfall around the river. Modeling system to predict the flood must have the prediction results as accurate as possible in order to produce a good system in predicting floods. Therefore, in this study proposed method of artificial neural network to analyze flood prediction ability by using artificial neural network. In this study case using artificial neural network Radial Basis Function. Radial Basis Function is a model of artificial neural network architecture consisting of three layers of which are the input layer, hidden layer, and output layer. The data used for the training and testing process are data of water level and rainfall data in 2015 in Dayeuhkolot. Prediction results in the training and testing process resulted in MAPE values are 0.047% and 1.05% for water level data and 4.97% and 29.1% for rainfall data with combination of hidden node = 35, learning rate = 0.2 and Spread constant = 1.1 with the target epoch maximum termination of 5000 epoch.

Keywords : Artificial Intelligence, Neural Network, Artificial Neural Networks, Flood prediction.