

Abstract

Predicting the total cost of using electrical energy with a high degree of accuracy is very important. The application of the appropriate method greatly affects the level of accuracy produced in the prediction. This prediction uses Feedforward Neural Network (FFNN) method with Backpropagation algorithm. In this final project will create a web-based system to predict the use of electrical energy with a neural network model. feed forward neural network (FFNN) is a model that is more often used because it is known to have good approximation capabilities and universal. In addition, the FFNN method is known for its advantages, namely having a predictive value that is very close to the actual value so that it produces a small error and has the ability to detect or perform analysis for very complex problems. For this reason, this study uses the Feedforward Neural Network method in predicting the total cost of using electrical energy by being influenced by the number of neuron units in the hidden layer, which allows the error value to be smaller. Accuracy In this method can be seen by using the MSE (Mean Square Error). In this Final Task using historical data on the use of kWh Building P Faculty of Electrical Engineering. FFNN test results use the best parameters, namely with a data partition of 70% data training 30% data testing, learning rate 0.001, and epoch of 80 resulting in mse value of 0.35037.

Keywords: Prediction, Feedforward Neural Network (FFNN), error.