Abstract

Air temperature forecasting is to predict the temperature that happens in specific time based on data that has been gathered in period of time. The information about temperature is needed to help us in our daily activity. And the global warming effect had already affected the people productivity.

For this reason, a system that could predict and learn the pattern of weather in our daily life. Artificial neural network with backpropagation training are used in this final project to predict the temperature using Conjugate Gradient Fletcher-Reeves as optimization. To improve accuracy, better ANN parameter design are needed.

New optimum design based on result from training and forecasting are founded. The design are 6 input neuron , 21 hidden neuron, 1 output layer, using 0.07 for learning rate. Using this design, the accuracy are up to 96%.

Keyword : *air temperature forecasting, Backpropagation, conjugate gradient Fletcher-Reeves(CGF), parameter optimal, ANN.*