

CHAPTER 6

CONCLUSION

The conclusion of this project is that the backpropagation algorithm can predict total sales with MSE 3.7% and stock with MSE 3% because MSE of total sales and stock <5% will make this prediction successful. The accuracy of this prediction is 92.4832308%. These results can be obtained with a max iteration or max epoch of 5000 for total sales and stock, hidden layer of 11 for total sales and stock, learning rate of 0.9 for total sales and 0.3 for stock, and target error of 0.0009 for total sales and 0.0014 for stock .

The more epochs or iterations, the algorithm for training takes longer and makes the results more accurate. the more hidden layer the algorithm learns the longer if using the hidden layer the more predicted the results will be more accurate but the program runs slower because the more hidden layer algorithm must pass through many hidden layers. Learning rate functions as controlling weight changes to correct errors (0,1 – 0.9). The greater the learning rate, the slower the changes but the predicted results will be more accurate, if learning rate has a small value, the faster the change.

This project can only predict the stock and total sales of rice per day and the data cannot be updated automatically. The variables used in this project are date, selling price, and temperature.

The suggestion from this project is to add variables and lots of data so that the prediction results are more accurate, make the data automatically updated, and better hardware for faster algorithm training.