Thesis Title	Classification of Heart Disease Data Using Synergistic Neural Networks
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Abstract

Classification is one of many tasks in Artificial Intelligence. Correct and reliable classification is both important and crucial in medical diagnosis. Synergistic approach to classification by neural networks is a recent method which can be used to improve the accuracy in classification.

This research work implemented Synergistic Neural Networks to classify Heart Disease Data from Cleveland Data Base. It adopted two known approaches to synergistic neural networks, namely summation and selection approaches. Five different types of neural networks had been selected in the synergy. A neural networks software known as NeuroSolutions was used as the implementation tool. Comparison was made among the best results from individual neural networks, from summation-typed synergistic neural networks and from selection-typed synergistic neural networks.

The result from the comparison revealed that the selection-typed synergistic neural networks (maximum method) yielded the best accuracy 80%. This work demonstrated the ability of synergistic neural networks in improving accuracy and reduces ambiguity in classification, especially when number of samples in training data set is limited.

Keywords: Artificial Intelligence / Classification / Cleveland Data Base / Heart Disease Data / Neural Networks / NeuroSolutions / Synergistic Neural Networks