ABSTRACT

Cancer is one of the second most deadly diseases in the world. One technology to deal with cancer is by detecting cancer using Microarray DNA technology. Cancerous cells that have gene expression can be read through DNA. Gene expression data has a high dimension so that required dimensional reduction techniques to facilitate in making a model. The method used to reduce the dimension is with PSO (Particle Swarm Optimization) feature selection algorithm. Then the PNN algorithm (Probabilitic Neural Network) is used for cancer classification. From the test results using PSO (Particle Swarm Optimization) algorithm with PNN classifier (Probabilitic Neural Network) then obtained a solution with an accuracy of 84%.

Keywords: *cancer, microarray, gene expression, Particle Swarm Optimization, Probabilistic Neural Network*