Abstract

Cancer is a disease that occurs at the beginning of mordibility around the world. Therefore a system that is able to analyze and find out who is infected with the disease using the genetic data from Deoxyribonucleic acid or patient DNA. Gene expression is part of the process of translating information on genetic information on the form of DNA or RNA that will become proteins and phenotypes. Information will be provided by genetic material ie information that has not had any meaning used to find meaning where it is not expressed into a phenotype. Therefore, at times specified are constructed by a patient who is otherwise infected or not. The algorithm used is Particle Swarm Optimization as a feature to select the most optimal attribute with Backpropagation Neural Network algorithm as a classification. The results of the system using the feature Particle Swarm Optimization has a higher accuracy than without using Particle Swarm Optimization, an accuracy of 83%.

Keywords: Gen Expression, Backpropagation Neural Network, Particle Swarm Optimization