Abstract

Mental health is one aspect that needs to be considered as physical health. People with severe mental disorders experience higher mortality rates. Schizophrenia ranks first in severe mental disorders that have a 40% to 60% chance of dying. The symptoms and difficulty of detecting schizophrenia have led to high rates of death from schizophrenia. Therefore, we need technology that can detect schizophrenia quickly and accurately. Machine Learning is one way that can help identify a disease. In this study, Simulated Annealing (SA) was used as a feature selection combined with a Support Vector Machine (SVM) as a classification method on schizophrenia microarray data. This research proves that SA feature selection has succeeded in increasing performance in all three kernels of SVM. The best model is obtained using the RBF kernel with 4 features and produces an accuracy evaluation value and F1-Score of 0.91

Keywords : schizophrenia, microarray, simulated annealing, support vector machine