ABSTRACT

Regularization method has been applied for pattern recognition which aims to classification data. This research using Discriminatively Regularized Least Squares Classification (DRLSC) method for classification. The weakness is in DRLSC method influenced by the amount of data that was closest (K) based K Nearest Neighbor method and regularization parameters (\( \eta \)). This research optimizing the parameters K and \( \eta \) automatically based on minimum error from DRLSC classification method. This research use hybrid Genetic Algorithm and Particle Swarm Optimization (GAPSO) method for optimization. Data for this research use UCI database, with IRIS, WINE, and LENS. Experiment has done and results fitness value from Optimization DRLSC based on GAPSO method have better fitness value than fitness value from Genetic Algorithm (GA) method or Particle Swarm Optimization (PSO) method with fitness value range from 7.3e-008 until 0.025.

Key Word : Classification, Discriminatively Regularized Least Square Classification, Genetic Algorithm, Particle Swarm Optimization, Pattern Recognition.