

Genetic algorithm fine tuning of Support Vector Data Descriptor (SVDD) for classification of monocotyledon and dicotyledon weeds

Abstract

Weed recognition using image processing has been performed and improved in various papers. In this paper, weed seedlings were discriminated using Support Vector Data Descriptor (SVDD) to identify monocotyledon weeds from mixture of monocotyledon and dicotyledon weeds. The feature selection and parameter fine tuning were performed using genetic Algorithm (GA). The resulting SVDD configurations were tested using 200 image samples. The best configurations gave an average of 95% recognition rate.