



An Image Processing Method Based on Features Selection for Crop Plants and Weeds Discrimination Using RGB Images

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Mots-clés	computer vision [5], Features selection [6], Imaging [7], Precision agriculture [8], RGB images [9]
Résumé en anglais	<p>In the context of computer vision applied to precision agriculture, this paper presents an imaging system based on shape and intensity features, extracted from RGB images, for the discrimination between crop plants and weeds. A segmentation method with many constraints to overcome light acquisition conditions is used and coupled with morphological filtering suitable for denoising segmented images. A SVMs classifier based on a polynomial kernel function is implemented and a k-folds cross validation process is used to evaluate the performance of the SVMs classifier usable in 2 different configurations. On a training dataset, these 2 configurations are evaluated for the performance of classification in terms of true and false positive rates, according to ROC curves and area under curves. On a test dataset, these 2 configurations are exploited, giving both a relevant classification rate.</p>
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