

Quality Grading of yellow apple using visual features and SVM classifier

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The aim of this thesis was the consideration of image processing application for quality grading yellow apple based on their visual features and SVM classifier. A number of 95 yellow apples were randomly selected. The images of apples were captured under developed illumination condition. Then the apples were sorted into three categories: first, second and third grade. According to our studies, the best feature sets for this purpose consist of refinement of defect region, color features, including mean of red (R), green (G) and blue (B) component of defected regions used for grading of apples. The images were processed with Matlab Software. The proposed system was based on SVM classifier. The proposed system has 85.7% recognition accuracy in best situation.

Keywords : quality Grading, Support vector machine, Feature Extraction

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