Abstract

In foodstuff trade, grading of coarse food resources is essential because samples of stuffs are subjected to adulteration. In the precedent, foodstuffs in the appearance of granules were conceded through sieves or supplementary mechanical way for grading purposes. In this manuscript, investigation is performed on basmati rice granules; to appraise the act via image processing and Neural Network Pattern Recognition Tool which is implemented based on the features extracted from rice granules for categorization grades of granules. Digital imaging is acknowledged as a proficient system, to haul out the features from rice granules in a non-contact mode. Images are acquired for rice using camera. Image Pre-processing techniques, Adaptive thresholding, Canny edge detection, Feature extraction are the checks that are performed on the acquired image using image processing method through Open source Computer Vision (Open CV) which is a library of functions that aids image processing in real time. The morphological features extracted from the image are given to Neural Network Pattern Recognition Tool. This effort has been prepared to categorize the appropriate quality category for a specified rice sample based on its parameters. The performance of image processing condensed the time of action and enhanced the crop identification significantly.
Analysis of Rice Granules using Image Processing and Neural Network Pattern Recognition Tool

References

Keywords

Open CV  Neural Network Pattern Recognition Tool  Adaptive Thresholding  Canny Edge Detection

Morphological features.