

An Enhanced Edge Detection Method Based on Integration of Entropy—Canny Technique

ABSTRACT

When analysing objects in images, it is necessary to distinguish the objects of interest from the background. This task can be achieved through segmentation process. Image segmentation is one of the most challenging issues in image processing domain. It remains an active research area with aims to distinguish between the foreground and background of objects. In order to extract the useful information from an image, edge detection is a reliable technique to solve this issue. Edge detection is a technique that aims at extracting the boundaries of the image by manipulating discontinuities gaps between pixels. This paper focuses on demonstrating an enhanced integrating framework; a modified entropy based approach with an enhanced Canny technique. By integrating two well-known techniques, the true edges were able to identify effectively. The peak signal-to-noise ratio (PSNR) and structural similarity index measure (SSIM) for the proposed technique shown was 4.1% and 16.75% higher than prominent techniques respectively. The proposed technique produced better similarity quality image and contains lesser noise.