Abstract

An edge detection algorithm for digital images is proposed in this paper. Edge detection is one of the important and most difficult tasks in image processing and analysis. In images edges can create major variation in the picture quality where edges are areas with strong intensity contrasts. Edges in digital images are areas with strong intensity contrasts and a jump in intensity from one pixel to the next can create major variation in the picture quality. This paper proposed an effective edge detection algorithm based morphological edge detectors and watershed segmentation algorithm using distance transform. The result confirms that the proposed algorithm is found to yield satisfactory and efficient segmentation of the digital images for edge detection. Experimental result presented in this paper is obtained by using MATLAB.
Watershed Segmentation based on Distance Transform and Edge Detection Techniques

- Hua Li et al., "An improved image segmentation approach based on level set and mathematical morphology," GREYC-ISMRA, CNRS 6072, 6 Bd Maréchal Juin, 14050 Caen, France.
- Mahua Bhattacharya, Arpita Das, "A Study on Seeded Region Based Improved Watershed Transformation for Brain Tumor segmentation," Indian Institute of Information Technology & Management, Gwalior Morena Link Road, Gwalior-474010.

Index Terms

Computer Science
Image Processing
Keywords
Edge detection  Segmentation  Distance Transform  Watersheds