Watershed Segmentation based on Distance Transform and Edge Detection Techniques

Authors:
Pinaki Pratim Acharjya
Dibyendu Ghoshal

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.

References

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Index Terms

Computer Science  Image Processing
Keywords
Edge detection  Segmentation  Distance Transform  Watersheds