Abstract

The commonly found abnormalities in endoscopic images are cancer tumors, ulcers, bleeding due to internal injuries, etc. Several methods of segmentation are employed in recent past for proper segmentation of such images. Intelligent scissors is one of the tools for segmentation. Here the segmentation of endoscopic images is presented using the intelligent scissors. This method is used to segment the tumor, abnormal regions and cancerous growth in the human esophagus. Several methods implemented in the recent past have yielded good results. But this method is simpler. Here a seed point is selected then the cost matrix is
constructed which gives the costs of the neighbouring points. Using Dijkstra’s algorithm, the nearest point falling in the same region is selected. The proposed method has shown encouraging results in segmenting the abnormal parts from esophageal endoscopic images.

Reference

- J. K. Udupa, Personal communication to W. A. Barrett regarding two-dimensional boundary detection using dynamic programming with graph searching. 1989.
- D. Daneels, et al., “Interactive Outlining: An Improved Approach Using Active Contours,”
Segmentation of Abnormal Region from Endoscopic Images using Intelligent Scissors


Index Terms

Computer Science          Pattern Recognition

Key words

medical image analysis

Image processing