Abstract

In this paper, a novel feature extraction scheme is proposed, based on multiresolution fast discrete curvelet transform for computer-aided diagnosis of liver diseases. The liver is segmented from CT images using adaptive threshold detection and morphological processing. The suspected tumour region is extracted from the segmented liver using FCM clustering. The textural information obtained from the extracted tumour using Fast Discrete Curvelet Transform (FDCT) is used to train and classify the liver tumour into hemangioma and hepatoma employing artificial neural network classifier. A comparison with a similar algorithm based on Wavelet texture descriptors shows that using FDCT based texture features significantly improves the classification rate of liver tumours from CT scans.

Reference

Diagnosis of Liver Tumor from CT Images Using Fast Discrete Curvelet Transform


Index Terms

Computer Science  Soft Computing
Key words

Liver Tumour

FCM technique

Texture analysis

Fast Discrete Curvelet Transform