

Image Segmentation Using Wavelets



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This thesis is submitted to the faculty of department of graduate studies in partial fulfillment of the requirements for the degree of MS in Physics.

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Abstract

Medical images contain various organs and each organ consists of different diagrams. Every image shows a separate organ. These organs are separated by segmentation tools. Wavelets transforms have been used for the compact analysis of Image segmentation, classification of the components of image and extraction. Wavelet transform provide flexibility. Wavelet transform would be optimized for the excellent adaptation in image segmentation. The standard image processing techniques can be replaced by wavelet transform because it gives best results for huge amount of problems in processing of digital images. Wavelet analysis provides high quality segmentation of desired medical images. This work is aimed at the use of wavelet transform for the segmentation of medical images which are taken from X-ray and magnetic resonance imaging (MRI). Another technique of segmentation technique such as watershed transform is compared with the result of wavelet transformation. In MATLAB, required algorithms are applied on medical images for segmentation processing.

Dedication



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Table of Contents

Introduction.....	Error! Bookmark not defined.
1.1 .Image Processing	Error! Bookmark not defined.
1.2 Types of Digital Image	Error! Bookmark not defined.
1.2.1 Binary Image	Error! Bookmark not defined.
1.2.2 Grayscale Image.....	Error! Bookmark not defined.
1.2.3 RGB Image.....	Error! Bookmark not defined.
1.2.4 Indexed Image	Error! Bookmark not defined.
1.3 Digital Image Representation	Error! Bookmark not defined.
1.4 Types of File Formats	Error! Bookmark not defined.
1.4.1 BMP Format.....	Error! Bookmark not defined.
1.4.2 Bin File Format	Error! Bookmark not defined.
1.4.3 PPM Format	Error! Bookmark not defined.
1.4.4 TIFF and GIF Format.....	Error! Bookmark not defined.
1.4.5 JPEG Format	Error! Bookmark not defined.
1.4.6 VIP Format.....	Error! Bookmark not defined.
1.5 Various Steps of Processing.....	Error! Bookmark not defined.
1.5.1 Image Acquisition	Error! Bookmark not defined.
1.5.2 Enhancement of Image.....	Error! Bookmark not defined.
1.5.3 Restoration	Error! Bookmark not defined.
1.5.4 Color Image Processing	Error! Bookmark not defined.
1.5.5 Wavelet and Multiresolution Processing.....	Error! Bookmark not defined.
1.5.6 Image Compression.....	Error! Bookmark not defined.
1.5.7 Morphological Operations.....	Error! Bookmark not defined.
1.5.8 Image Segmentation.....	Error! Bookmark not defined.
1.5.9 Image Representation.....	Error! Bookmark not defined.
1.5.10 Description	Error! Bookmark not defined.
1.5.11 Recognition of Object	Error! Bookmark not defined.

1.6 Medical Imaging	Error! Bookmark not defined.
1.6.1 X-Ray Imaging	Error! Bookmark not defined.
1.6.2 Angiography	Error! Bookmark not defined.
1.6.3 Endoscopy	Error! Bookmark not defined.
1.6.4 Computerized Axial Tomography	Error! Bookmark not defined.
1.6.6 Ultrasound Imaging	Error! Bookmark not defined.
1.6.7 Magnetic Resonance Imaging	Error! Bookmark not defined.
Image Segmentation	Error! Bookmark not defined.
2.1 Introduction of Segmentation	Error! Bookmark not defined.
2.2 Definition	Error! Bookmark not defined.
2.3 Extension	Error! Bookmark not defined.
2.4 Early Segmentation Methods	Error! Bookmark not defined.
2.5 Modern Segmentation Techniques	Error! Bookmark not defined.
2.6 Types of Segmentation Techniques	Error! Bookmark not defined.
2.6.1. Morphological Processing	Error! Bookmark not defined.
2.6.2 Watershed Transformation	Error! Bookmark not defined.
2.6.3 The Haar Transformation	Error! Bookmark not defined.
2.6.4 Distance Transform	Error! Bookmark not defined.
2.6.5 Watershed Segmentation using Gradient	Error! Bookmark not defined.
2.6.6 Wavelet Transformation	Error! Bookmark not defined.
2.6.7 Discrete Wave Transform	Error! Bookmark not defined.
2.7 Background of Wavelets	Error! Bookmark not defined.
2.8 Introduction of Wavelets	Error! Bookmark not defined.
2.9 Wavelet Analysis	Error! Bookmark not defined.
2.10 Fourier Analysis	Error! Bookmark not defined.
2.11 Wavelet Families	Error! Bookmark not defined.
2.11.1 The Haar	Error! Bookmark not defined.
2.11.3 Coiflets	Error! Bookmark not defined.
2.11.4 Biorthogonal	Error! Bookmark not defined.
2.11.5 Symlets	Error! Bookmark not defined.
2.11.6 Morlet	Error! Bookmark not defined.

2.11.7 Mexican Hat	Error! Bookmark not defined.
2.12 Wavelet Transformation	Error! Bookmark not defined.
2.13 Continuous Wavelet Transform	Error! Bookmark not defined.
2.13.1 Scaling.....	Error! Bookmark not defined.
2.13.2 Shifting.....	Error! Bookmark not defined.
2.14 Reconstruction of Wavelets	Error! Bookmark not defined.
2.15 Decomposition Tree.....	Error! Bookmark not defined.
Results.....	Error! Bookmark not defined.
3.1 Segmentation using Wavelet Transform.....	Error! Bookmark not defined.
3.1.1 Image Feature Extraction	Error! Bookmark not defined.
3.1.2 Pixel Difference.....	Error! Bookmark not defined.
3.1.3 Circular Averaging Filtering	Error! Bookmark not defined.
3.1.4 Thresholding.....	Error! Bookmark not defined.
3.1.5 Skeletonizing.....	Error! Bookmark not defined.
3.2 Watershed Transformation.....	Error! Bookmark not defined.
3.3 Watershed Transform of Gradient Magnitude	Error! Bookmark not defined.
3.4 Comparison between Wavelet and Watershed Transforms	Error! Bookmark not defined.
3.5 Comparison between Wavelet and Gradient Magnitude ...	Error! Bookmark not defined.
3.6 Comparison between Wavelet and Watershed Transforms of Gradient Magnitude .	Error! Bookmark not defined.
Conclusion	Error! Bookmark not defined.
Appendices.....	Error! Bookmark not defined.
References.....	Error! Bookmark not defined.

List of Figures

Figure 1. 1: Binary image	Error! Bookmark not defined.
Figure 1. 2 Grayscale image	Error! Bookmark not defined.
Figure 1. 3 RGB \color image.....	Error! Bookmark not defined.
Figure 1. 4 An Indexed image.....	Error! Bookmark not defined.
Figure 1. 5 X-Ray image of hand and broken Ankle.....	Error! Bookmark not defined.
Figure 1. 6 CT scan images of Heart and Brain.....	Error! Bookmark not defined.
Figure 1. 7 Nuclear Medicine Images of Thyroid.....	Error! Bookmark not defined.
Figure 1. 8 ultrasonic image of liver and infected kidney	Error! Bookmark not defined.
Figure 1.9 MRI images of lower Back and Brain.....	Error! Bookmark not defined.
Figure 2. 1: sine wave and wavelet.....	Error! Bookmark not defined.
Figure 2. 3 Sinusoidal wave.....	Error! Bookmark not defined.
Figure 2. 4 Fourier Transformation Process	Error! Bookmark not defined.
Figure 2. 5 Haar wavelet function.....	Error! Bookmark not defined.
Figure 2. 6 db Wavelets	Error! Bookmark not defined.
Figure 2. 7 coiflets	Error! Bookmark not defined.
Figure 2. 8 Biorthogonal	Error! Bookmark not defined.
Figure 2. 9 Symlets	Error! Bookmark not defined.
Figure 2. 10 Morlet	Error! Bookmark not defined.
Figure 2. 11 Mexican Hat	Error! Bookmark not defined.
Figure 2. 12 Wavelets of different scales and positions	Error! Bookmark not defined.
Figure 2. 13 scaling.....	Error! Bookmark not defined.
Figure 2. 14 Scaling with frequency.....	Error! Bookmark not defined.
Figure 2. 15 shifting of wave	Error! Bookmark not defined.
Figure 2. 16 wavelet reconstruction.....	Error! Bookmark not defined.
Figure 2. 17 up sampling	Error! Bookmark not defined.
Figure 2. 18 reconstruction filters.....	Error! Bookmark not defined.
Figure 2. 19 wavelet chain processes.....	Error! Bookmark not defined.
Figure 2. 20 Wavelet decomposition tree	Error! Bookmark not defined.

Figure 3. 1 X-ray images	Error! Bookmark not defined.
Figure 3. 2: MRI images	Error! Bookmark not defined.
Figure 3. 3 X-ray contrast images.....	Error! Bookmark not defined.
Figure 3. 4 MRI contrast images.....	Error! Bookmark not defined.
Figure 3. 5: Pixel difference of X-ray images.....	Error! Bookmark not defined.
Figure 3. 6 Pixel difference of MRI.....	Error! Bookmark not defined.
Figure 3. 7 circular averaging filtering on X-ray image	Error! Bookmark not defined.
Figure 3. 8 circular averaging filtering on MRI.....	Error! Bookmark not defined.
Figure 3. 9 Thresholding of X-ray images.....	Error! Bookmark not defined.
Figure 3. 10 Thresholding of MRI.....	Error! Bookmark not defined.
Figure 3. 11 Skeletonizing of X-ray images	Error! Bookmark not defined.
Figure 3. 12 Skeletonizing of MRI	Error! Bookmark not defined.
Figure 3. 13 Binary image of X-rays	Error! Bookmark not defined.
Figure 3. 14 Binary image of MRI.....	Error! Bookmark not defined.
Figure 3. 15 watershed transform of x-ray images	Error! Bookmark not defined.
Figure 3. 16 watershed transform of MRI	Error! Bookmark not defined.
Figure 3. 17 gradient magnitude of original x-ray image	Error! Bookmark not defined.
Figure 3. 18 gradient magnitude of original MRI.....	Error! Bookmark not defined.
Figure 3. 19 Watershed Transform of Gradient Magnitude on X-ray	Error! Bookmark not defined.
Figure 3. 20 Watershed Transform of Gradient Magnitude on MRI.....	Error! Bookmark not defined.