Image Segmentation

- One of the most common procedures and one of the most important tasks in medical imaging applications
- In computer vision, the image segmentation is process of partitioning the image into multiple segments
- This technique or group of techniques refers to dividing images into regions with similar attributes. The attributes are often gray levels, colors, edges, texture characteristics or spectral properties
- The main goal of image segmentation is to simplify the representation of an image into something that is more meaningful and thus makes an image easier to analyze in the image processing tasks

Implementation of Image Segmentation

- Detecting microcalcification in the mammography images which major role is in the opportunely detection and treatment of lesion
- Creating automated computed tools for microcalcification detection based on wavelet filters and use of artificial neural networks
- Extraction of the tumor region
- Detection of the breast lesions

Detection of the Breast Lesions

- Starts with extraction of regions of interest (ROIs) and classifying them
- Applies comparisons with existing image database
- Huge number of operations often require processing in more stages
  which can be physically separated in the work stations
  where every part performs the given task
- The processing time can be limited parameter
  and it can be speeded up using dataflow computing paradigm

ROI Extraction

- The use of algorithm for region of interest based image segmentation for breast mammogram images in computer aided diagnosis systems can reduce processing time and data storage
- The method for mammogram ROI detection is composed of pectoral muscle removal and background removal
- This App is very useful as a preprocessing tool for many other algorithms

Pectoral muscle

Background

MAXELER
Technologies