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GLOBAL TALENT MANAGEMENT IN THE DIGITAL ERA

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College with Potential for Excellence

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Mary Land, Madurai

GLOBAL TALENT MANAGEMENT IN THE DIGITAL ERA

© Faculty Members of MBA, MCA, M.Sc. IT
Fatima College

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AUTOMATIC SEGMENTATION OF THE PULMONARY LOBES FROM CHEST CT SCANS BASED ON FISSURES, VESSELS, AND BRONCHI

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Abstract

In image processing the segmentation of image is a major task. The segmentation is related to clinical practice and challenging for causes severe diseases or incomplete fissures. First we are going to detect the foreground and background of the image. After that the automated segmentation method is used to segment the lungs. This automated segmentation method is called as Marker based watershed transformation. In this transformation the lungs divided into lobes. The lung image contains fissure, vessels and bronchi. From this segmentation result we are going to calculate the distance between the incomplete fissures.

Further we draw graph from this result, this graph contains the distance between the complete fissures result. This segmentation can be analyzed by the integration of several anatomical structures is against misfissures or incomplete fissures. For evaluation the method was compared to a recently published method on 20 CT scans with no or mild disease. Finally, we analyze the relation between segment quality and incomplete fissure it shows the robust against incomplete fissures.

Image Processing

Image processing is a method to convert an image into digital form and perform some operations on it, in order to get an enhanced image or to extract some useful information from it. It is a type of signal dispensation in which input is image, like video frame or photograph and output may be image or characteristics associated with that image. Usually Image Processing system includes treating images as two dimensional signals while applying already set signal processing methods to them. It is among rapidly growing technologies today, with its applications in various aspects of a business. Image Processing forms core research area within engineering and computer science disciplines too.

Image processing basically includes the following three steps. Importing the image with the optical scanner or by digital photography. Analyzing and manipulating the image which includes data compression and image enhancement and spotting patterns that are not to human eyes like satellite photographs. Output is the last stage in which result can be altered image or report that is based on image analysis. The two types of methods used for Image Processing are Analog and Digital Image Processing. Analog or visual techniques of image processing can be used for the hard copies like printouts and photographs.

Image analysts use various fundamentals of interpretation while using these visual techniques. The image processing is not just confined to area that has to be studied but on knowledge of analyst. Association is another important tool in image processing through visual techniques. So analysts apply a combination of personal knowledge and collateral data to image processing. Digital Processing techniques help in manipulation of the digital images by using computers. As raw data from imaging sensors from satellite platform contains deficiencies. .

To get over such flaws and to get originality of information, it has to undergo various phases of processing. The three general phases that all types of data have to undergo while using digital technique are Pre- processing, enhancement and display, information extraction. Before going to processing an image, it is converted into a digital form. Digitization includes sampling of image and