

# Feature Extraction of DICOM Images Using Canny Edge Detection Algorithm

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## Abstract

Generally, in the medical field early diagnosis of the disease was performed using MRI, CT scans, X-ray, and ultrasound images. These medical images were captured in Digital Imaging and Communication in Medicine (DICOM) format (Bhagat and Atique in Medical Images: Formats, Compression Techniques and Dicom Image Retrieval Survey, 2012) [1]. As per the structure of DICOM image, physicians were unable to detect strangeness or disease in the patient without any image processing. Image processing and machine learning process can be useful to identify strangeness in these images by evaluating feature extraction and boundary detection of DICOM images which aims to help experts to analyze medical images. These medical images actively engaged in the medical field to diagnose disease and give proper treatment. Nowadays due to increase in the large database of DICOM images, the classification and retrieval of images have been a critical task for diagnosis of disease. The content-based image retrieval is effectively applicable for effective treatment of disease. Canny edge detection algorithm is useful for extracting features of medical images.

## Keywords

Canny edge detector Gradient magnitude Non-maxima repression  
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