Edge Detection of Femur Bones in X-ray images – A comparative study of Edge Detectors

Abstract

Medical images carry huge amount of information for the analysis of various diseases in the human body. The X-ray images are used for examining bone structure and other tissues. Also, the clear conclusion about disease diagnosis and treatment can be drafted out from the medical experts based on the X-ray images. The objective of this paper is to compare the performance of edge detectors used for edge detection of the human femur bone in X-ray images. The experimentation has been done with various edge detectors, namely, Roberts, Sobel, Prewitt, Canny’s and Laplace operators. The results show that the Laplace operator performs better than other methods in its application to X-ray images of femur bones, which has significance to medical and forensic experts.

References

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