BONE FRACTURE DETECTOR

ABSTRACT

Diagnosis through computer-based techniques is nowadays is tremendously growing. Highly efficient system that incorporates modern techniques and fewer resources is required to speed up the diagnosis process and also to increase the level of accuracy. Fracture in a bone occurs when the external force exercised upon the bone is more than what the bone can tolerate. Canny Edge detection is an algorithm which is an image processing methodology to detect the bone fracture and it is efficient use of automated fracture detection and overcome the noise removal problem. There are many methods available for edge detection like Sobel, Canny, Log, Prewitt and Robert, these methods have certain drawbacks like, multiresolution analysis cannot be done, so there may be difficulties to detect minor details. Secondly these methods works fine with high quality images, but are not good enough for noisy images as, they cannot distinguish edges and noise components. The proposed method comes over these problems is using CNN algorithm & the results are compared with one of the best classical edge detector. The simulation results shows that the proposed method has been proved an efficient method for performing edge detection at multiple scales, even in the presence of noise also, that can extract information and perform required processing even at much smaller parts of an image and handle noisy images more efficiently as compared to classical edge detectors.

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