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Determining the Type of Long Bone Fractures in X-Ray Images

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Abstract: Computer-aided diagnosis is a very active field of research. Specifically, using medical images to generate a quick and accurate diagnosis can save time, effort and cost as well as reduce errors. Previous works have considered the problem of detecting the existence of fractures in long bones using x-ray images. In addition to the existence of fractures, this paper considers the problem of determining the fracture type. To the best of our knowledge, ours is the first work to address this problem. After preprocessing the images, we extract distinguishing features and use them with different classification algorithms to detect the existence of a fracture along with its type (if one exists). The experiments we conduct show that the proposed system is very accurate and efficient.