Abstract

This paper presents an advisory system that helps those in charge of cases of physical therapy in order to a diagnosis of patients and providing appropriate treatment steps for each case. The proposed system consists of three main stages namely image processing, text processing and advisory system. Each of these stages is contributed as the following:

Image processing stage is used two algorithms to achieved its task, the first is Gray-Level Co-Occurrence Matrix (GLCM) algorithm to extract the features from x-ray images and the second is KNN algorithm to classified the images features, then stored in a database.

Text processing stage is used to convert the text report corresponding to an image to automated reports. This occurs through several steps like preprocessing, tokenization, stop responding word filtering, and count frequency.

Lastly, the advisory system is consists of two parts, a knowledge base is built by expert man
that helps to extract the rules from databases of image and text. The second part is inference engine that executes the matching between query rule and knowledge base.

The results of this paper are so convincing, where the proposed system is applied on several patients and the extracted of cure reports are satisfied to experts in the field.

References


Index Terms

Computer Science  Image Processing
Keywords

Image processing, Text processing, Advisory system