

Morphological characteristics of X-ray thorax images of COVID-19 patients using the Bradley thresholding segmentation

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Abstract	The coronavirus disease 2019 (COVID-19) pandemic has made test screening much needed. Currently, the most commonly used is the swab type. Although in fact, there is also a screening method with chest radiology. The purpose of this study is to develop a COVID-19 early detection system based on X-ray images of the patient's thorax in the form of a computer-aided diagnosis. This case is based on the fact that X-ray modalities are available in several health care centers in Indonesia, compared to other modalities such as computed tomography (CT) scan or magnetic resonance imaging (MRI). In this paper, we emphasize the X-ray thorax image segmentation process to explore the morphological information of the thorax. We use the Bradley thresholding segmentation method. The results obtained are promising to be further developed with a performance percentage of 73.33% for the thorax for COVID-19 patients and 54% for the thorax for normal patients.
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