

IMPLEMENTATION OF THE RANDOM FOREST METHOD FOR CLASSIFYING LUNG X-RAY IMAGE ABNORMALITIES

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Abstract	<p>The Covid-19 pandemic has caused a severe global health crisis. Rapid and accurate diagnostics are essential in combating this disease. In this regard, lung X-ray images have become critical for identifying Covid-19 infections. The method used in this study is random forest, a classification method based on ensemble modeling of decision trees. The lung X-ray images used in this study were taken from a datasheet containing images from COVID-19 patients and images from non-Covid-19 patients. The data pre-processing process involves extracting features from the images using image processing techniques and statistical analysis. The random forest model is trained using the processed datasheet to classify the lung X-ray images. The model's performance is evaluated using accuracy, sensitivity, and specificity metrics. In addition, cross-validation is used to measure the reliability and generalization of the model. The study results showed that the random forest method achieved good classification performance in distinguishing COVID-19 lung X-ray images from normal ones. The resulting model provided high accuracy and good sensitivity in identifying Covid-19 cases. These results show the potential of the random forest method in supporting early diagnosis and treatment of COVID-19 disease.</p>
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Author	Dr RETNO SUPRIYANTI, S.T, M.T