# ABSTRACT

Tuberculosis disease is determined by some steps, one of them is from lung's X-ray image. However, there are still some difficulties in the detection of tuberculosis disease, especially in analyzing the results of X-ray images. The analysis conducted so far can be said to be subjective, because it still relies on the subject of the judge, in this case is a medical expert. Thus, there is a need for computer vision-based system to get the better result.

This final task through pre-processing which consists of morphological operations, cropping, and normalization. Next step is feature extraction using Wavelet transform, histogram, edge detection, and Spectrum Fourier, and classification using artificial neural network ELM (Extreme Learning Machine).

From the test result, the accuracy rate is 100% for training data and 100% with computation time 15.418078 seconds for test data.

Keywords: Tuberculosis, lung's X-ray image, image pre-proccessing, Extreme Learning Machine