

## **ABSTRACT**

Watershed segmentation is a step of image processing that is able to separate an object from its background even though the edge of each object is connected to each other. This condition makes further analysis possible.

As in the medical field, the segmentation technique can be applied to analyze a disease. When it is used to analyze the white blood cell, watershed segmentation is able to recognize the nucleus of the white blood cell which is differentiated into white blood cell with granules and without granules.

Hopefully, the result of this research can help increase the level of accuracy of more than 84% in order to diagnose a disease based on the morphology of the white blood cell's nucleus more reliably.