ABSTRACT

Cervical cancer is a deadly disease. According to the WHO (world health organization), cervical cancer ranks the 2nd highest mortality rate after breast cancer and it is estimated that 50,000 women suffer from cervical cancer every year. Currently, many women with cervical cancer only realize that they have cervical cancer at an advanced or late stage, which causes the death rate of cervical cancer sufferers to be very high. One of the efforts to reduce cervical cancer sufferers is to detect the potential for cervical cancer early.

There are three methods of early detection of cervical cancer including: pap smear, HPV examination and IVA test. One way of early detection of cervical cancer in order to reduce the risk of cervical cancer is through an IVA (Acetic Acid Visual Inspection) examination. IVA examinations are often performed because they tend to be cheaper, and the examinations and test results are processed directly, without having to wait for laboratory results.

In this final project, image processing is performed to determine the shape of the white lesion pattern based on the data obtained from the results of the IVA test. Image processing was performed using the Canny Edge Detection method, then the data would be classified using a Convolutional Neural Network to determine pre-cervical cancer diagnosis. The results obtained in this study resulted in pre-cervical cancer detection accuracy reaching 96 %

KEY WORD: cervical cancer, IVA test, digital image processing, Canny Edge Detection, Convolutional Neural Network.