

Abstract

Cervical cancer is a cancer that attacks women. Cancer symptoms are sometimes not realized by women so that cancer growth will become acute. Early detection is highly recommended to find out if women have cervical cancer. However, early detection is difficult and relatively expensive in the cost of the inspection. There is a method of examining early cancer detection using a visual inspection test with acetic acid or the so-called IVA test. The IVA test is relatively cheap and fast to use for pre-cervical cancer examination. The results of the IVA test were positive IVA and negative IVA. The cervix diagnosed as a positive IVA is characterized by a white lesion called acetowhite. In this final project, a system that can detect pre-cervical cancer in IVA test images is made using the K-Means Clustering method. The highest results obtained from the test results were 72,14% accuracy, 70% sensitivity, and 74,29% specificity using the K-Means Clustering method with cluster 2 values, GLCM (*Gray Level Co-occurrence Matrix*) and color moments as feature extraction. These results are achieved using the Support Vector Machine (SVM) classification method with a linear kernel. In this final assist physicians in analyzing acetowhite.

Keywords: cervical cancer, Visual Inspection of Acetic Acid (VIA), acetowhite epithelium zone, image processing, K-means Clustering, detection, ROI (Region of Interest)