ABSTRACT

Generally cataract eye disease occurs in people who are elderly. At present, in the world of medicine to detect cataracts, it still goes through a series of checks that require a long time, such as checking using a snellen card, using a keratometer, then checking slit lamps and ophthalmoscopy. There are two important tools to diagnose cataracts, namely A-scan ultrasound (echography) and endothelial cell calculations. Therefore, to be able to cope with an increase in cataract sufferers, the authors will use digital image processing or image processing to accelerate the estimation of cataract eyes. Digital image processing can be done using certain algorithms that can recognize objects.

In this final project using the gabor wavelet method and its classification support vector machine. gabor wavelet is used as a feature extraction from two-dimensional images that will be processed and recognized based on the characteristics built from the results of processing these images. The classification support vector machine can divide the classification into more than two parts and can classify high-dimensional data. The application that will be used is matlab makes it easy to estimate cataract eyes from a two-dimensional image.

The results obtained from a series of processes above are a Matlab-based system that can be used to identify and classify cataract eyes. In this test the best accuracy is 86.6667% with the best computation time 1.7105 s using the order parameter or mean, variant, entropy with wavelenght = 2 and orientasi = 6 and using the Multiclas parameters OAO and OAA, all kernel values and all kernel option values tested in this research.

Keyword : Cataracts, Gabor Wavelet, Support Vectro Machine