ABSTRACT

Skin is the outer part of human body that has important role to protecting organs in human body from outside environment. Skin disease is one of health problems that quite difficult to handle because The skin is the outermost part of the human body that has an important role in protecting organs in the human body from attacks originating from the outside environment. Skin disease is one of the health problems that is quite difficult to handle because of the transmission that is very easy and fast. Identifying skin diseases based on the type of skin infection is an important step to find out the right treatment.

In this final project an identification system designed a system based on the first order statistical texture analysis using the Fast Fourier Transform (FFT) method with Artificial Neural Networks (ANN) as classifier. First, training image is reduced to 512×512 pixels. Second, image got blury so hair in image can be disappears and make preproccessing easier. Test using 1361 skin disease dataset with classification dermatofibroma, melanoma, nevus pigmentous, and squamous cell carcinoma.

From test of this skin disease classification using statistical feature extraction from the 2D FFT pattern and the resilie.nt-backpropagation artificial neural network classification method. The best testing result from Imaginary-Log with accuration 53,06% at 10 test with Mean Square Error 0,425 and computing time 1s.

Key Word: *Fast Fourier Transform (FFT), Artificial Neural Networks (ANN), Skin Image, Backpropagation*