ABSTRACT

Humans are social beings, therefore every human always interacts all the time. When human interact with their interlocutors will always involve feelings and emotions. But, not all feelings and emotions felt by human can be disclosed all, so they are make a lie to hide the facts.

In this study using a number of 20 respondents and each - each respondent will give 5 questions. 1 respondent in 5 videos, so total video total is 100 respondent's video. The eye video taken is the right eye. This study used 20 video data of respondents to be used as 15 training data (75 video) and 5 test data (25 videos). To detect enlargement of pupil diameter and eye movement using Hough Transform Circular. After the stage of the Hough Transform Circular proc ess then goes to the classification stage using Backpropagation Neural Network.

Testing Results and Analysis System of 20 respondents (100 videos) obtained accuracy of the average - average mendekteksi system appropriately movement by 55.18% while the average accuracy - mendekteksi system average pupil diameter changes appropriately by 52.83%. Testing results total data testing using Backpropagation Classification of 5 respondents (25 video) accuracy rate obtained by 72%

Kata Kunci : *Lie Detector, Pupil Dilation, Eye Movement, Artificial Neural Network, Backpropagation*