

## ABSTRACT

Lying is a trait that is not commendable, all humans in this world must have lie. Lying can be done for good sake, but there are a lot of people who use lies in the wrong way, for example to slander others or to benefit themselves. The lie detector is urgently needed nowadays, but the price is expensive and there a lot of its components which make it difficult to own for the society and the lie detector only belongs to state security organization. Therefore, the affordable and easy components lie detector is needed, so that the society can understand the tool and use it wisely.

Psychological theories conclude that, someone who lies will have certain characteristics, especially in the part of eye, such as enlarged pupil diameter of eyes, the eyelid does not blink when it says lies, and the movement of eyeballs which always moving to indicate someone is thinking something.

To finish this final assignment, the Author make a system to detect someone's lie based on camera video by anlysing the given parameters, which are eye moving (eye tracking) and the change of pupil diameter. These parameters are to be tested and taken with video cameras that are integrated with the software to be analysed whether someone is lying or not. With the method of Haar Cascade Classifier and Neural Network (Multilayer Perceptron) get the accuracy of the research system 87%.

**Keywords:** *Lie Detector, Haar Cascade Classifier, Neural Network, Multilayer Perceptron, Camera Videos, Eye Pupils, Eye Tracking.*