

## ABSTRACT

Every human being in this world must have a face shape that is not the same even with identical twins have differences in the shape of the face. One of the human ways to get to know each other is to remember the shape of the face in our brain memory. On the memory of the human brain will provide a picture of a face we once knew before. The memory analogy can be described as a machine or device that has the same artificial intelligence capabilities as humans to recognize individuals through facial images. Local Binary Pattern Histogram (LBPH) method has been widely used to develop biometric security applications. In this Final Project the authors designed the image recognition system with face detection using LBPH method that implemented in android based real-time. Face detection method using LBPH method (local binary pattern histogram) is the most suitable method for face image recognition to be implemented on android mobile devices because it uses a simple calculation.

In this Final Project research using the LBPH (Local Binary Pattern Histogram) method in the Neighbors = 8, Gridx parameter. Gridy = 8x8, radius = 1, BW hold thresh size = 180, and a distance of 20-25cm has an accuracy of 95.56%, FAR=3.33 , FRR= 1.33 and a computing time of 2.35 seconds.

The contribution of this final project is to provide innovation from previous research with face detection for presence in real time. The results of this study are expected to be useful for campuses that still use RFID tapping presence and use an android-based face detection system directly as an alternative to attendance on campus and as a method that can be compared with other methods in terms of parameters, FAR, FRR, accuracy

Keywords: *image recognition, LBPH, LBPH, FRR, FAR, android*