ABSTRACT

Face recognition is a technology from a computer that allows us to identify or verify a person's face through a digital image. The introduction of this facial system has been widely used in security systems in addition to the introduction of retinal eyes, fingerprint recognition, and Iris.

Some development with RFID, fingerprint, or QR Code method has been done a lot. But based on the literature studies conducted, the development has not had a level of accuracy and is considered less efficient. Therefore the author will implement an automated face identifier application using openCV Android which connects to the database to help the attendance registrar system so it is not difficult to take down the manual. The method of introduction used is the Eigenface method with the Haar Cascade algorithm capable of detecting rapidly and realtime an object including a human face. The test parameters that will be performed include three conditions that are test against the face type, against the distance to the object, and against the delay of the object reading time. All these conditions refer to the level of accuracy expressed in the FAR (False Accepture Rate) and FRR (Fasel Rejected Rate).

The results of the first test of the face type show the level of far value accuracy in the type of the bespectacled face of 50%, while those who do not have a value of far 51.6%. Testing both types of faces had no FRR value, and gained an accuracy value of 50% for bespectacled face types and 48.3% for those types of unnotled faces. In the second test of the distance between the phone and face, indicates the level of accuracy of the FAR value at a distance of 20 cm is 57.1%, while at a distance of 30cm has a value of FAR 43%. Both distances tested have no FRR value, and obtained an accuracy value of 57% for a distance of 30cm and 42.6% for a distance of 20 cm. In the third test of the face reading delay, the average delay is obtained at a distance of 30cm is 16.892 and the average delay at a distance of 20cm is 11.885.

Keywords: *Face Recognition, Eigenface,openCV, Android*.