ABSTRACT

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FACE RECOGNITION SYSTEM WITH LOCAL BINARY PATTERN HISTOGRAMS (LBPH) METHOD USING FIREBASE BASED ON OPENCV  
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(xiv + 76 + Appendices)

Facial recognition is one of the applications of biometric technology that utilizes analysis of image processing. The process of facial recognition includes face detection and face identification. Both of these processes have previously been developed in the form of separate processes that have not been veiled. Through a face recognition system, a person's self-identity can be known easily just by using a camera system. The face recognition system uses the Local Binary Pattern Histograms algorithm for processing facial features and the Haar Cascade for facial frame capture. Local Binary Pattern Histograms or commonly called LBPH is one of the methods used for processing facial features such as face detection and face recognition. This method will change the texture of a face image into a binary value, and the value represents the part of the pixels of a face that forms a circle and has a center as a reference to these values. The distance between the densities of these binary values is called neighbors. The database used by the face recognition system uses an online database that is firebase shaded by Google so that with the creation of an online face dataset, face recognition operations can be more efficient. OpenCV is an image processing module that is used to create, change, and modify a digital image so that it can be used in many ways such as face image processing. Of the 62 facial images that were tested, the percentage of the overall accuracy of the face recognition system process was 93.5%.

Bibliography (2002 - 2019)