

ABSTRACT

The rapid developments in the field of biometrics is currently very useful. For example, person's medical history searches application through face detection. With this technology a person's medical history replaced probability by another one can be reduced to the smallest percentage. In line with rapid development, the violation of law related to the processing of biometric has also increased. Rise of identity fraud through the use of pictures of someone else or a personal photo editing now more commonly found. Through this research will be predict person's face in the future so that a person's identity fraud could be reduced as little as possible. It is possible due to every human being has a distinctive facial characteristics. With increasing age, then the shape of the face will also be changed. With that fact, person's face can be predicted based on his age.

The problem that arise when it is in predicting the face must be preceded by a process of removing all the hair on the face (mustache, beard, whiskers), and various accessories (caps, gowns, berets, sunglasses and so on) from the image. Through this research will be improving the performance of SVM method to build a software that is able to model a face which in turn is able to predict a person's face based on age without having preceded the removal of parts and accessories of hair on the face.

Prior to the modeling process, the application performs the face detection with edge detection algorithm. The approach works by identifying the points in a digital image where brightness changes drastically. As for the modeling of facial images, use a pattern recognition method that is growing rapidly. The method is *Support Vector Machine* (SVM). This method was first introduced by Vapnik in 1992 as a series of excellence harmonic concepts in the field of pattern recognition. As one method of pattern recognition, SVM age is fairly young. However, many applications that can be solved by this method

This research strongly need for an photograph example of a person when he is baby, child, adolescent and adult. From these examples, processed and searched the similarities and differences of each age, so that we can predict a person's face at a certain age.

Keyword : Image, biometrics, pattern recognition, SVM, face, prediction.