

ABSTRACT

The major disasters that occurred in Indonesia caused great damage, especially to the bodies of the victims. This makes individual recognition methods using fingerprints and lip prints are unusable. With the advancement of time and education, a new method in forensic odontology has been discovered, namely through the palatine rugae pattern. Palatine rugae are folds and wrinkles of the mucous membranes that are irregular in abundance in the oral cavity. Its deep location causes the palatine rugae to have good resistance. Many studies on palatine rugae have been carried out. Thus, it can be concluded that each individual has a different pattern of palatine rugae, even in twins.

Geometric Active Contour has advantages, it can detect lines and curves that are not closed, and can detect objects with different intensities. The method with such advantages is very suitable for the type of image data where the light is uneven. The Local Binary Pattern method has also been proven to be a strong descriptor and low computational rate. So this method is suitable for use on mobile applications that are expected to work massively and quickly in the field where the incident occurred.

The research at this time will be implementing android in identifying the male or female gender in individuals through the palatine rugae pattern. This application involves 19 image data of palatine rugae. Through this study, the final result of an individual's gender identification accuracy is 100% with a total computation time of 63.261 seconds with an average computation time of 3.33 seconds per individual. So, it can be concluded that the system in this study can be used to identify gender in individuals and in a relatively short time.

Keywords: Android, Geometric Active Contour, K-Nearest Neighbor, Local Binary Pattern, Rugae palatina