

ABSTRACT

Natural disasters, criminal acts or accidents can cause casualties. Victims are often found in an unidentified state that requires an identification process. Identification becomes very difficult if the victim is in a situation that is not possible. Thus, forensic odontology is an important role in the process of finding victims' identities.

In forensic science, rugae palatina is one of the solutions used for individual identification . Rugae palatina is a number of bumps forming a pattern that is located in the oral cavity. Pattern of Palatine Rugae everyone is different so it can be used for individual identification . In addition, rugae palatina has a fairly good resistance to several factors.

In this study, the author made an application for processing digital image rugae palatina for individual identification. The method used is Geometric Active Contour (GAC) and K-Nearest Neighbor (K-NN). This image processing process begins with preprocessing followed by the Geometric Active Contour and K-Nearest Neighbor Method (K-NN) method as its classification.

Results obtained from research this is The highest accuracy is obtained amounting to 84,48% with time computing amounting to 47,64 seconds . Then it can be concluded that the system in this study has been able to identify palatine rugae to individuals.

Keywords: *Geometric Active Contour, K-Nearest Neighbor, Palatine Rugae*