

ABSTRACT

Solutions for determining gender are an important part of the forensic field, aiming to help in identifying victims or criminals. One approach that is starting to become more common is analyzing bite marks, which are believed to have unique characteristics that differ between males and females. This research was motivated by the limitations of traditional methods in quickly and efficiently identifying gender, especially when the physical condition of the victim makes standard biometric identification impossible. The proposed solution is using image recognition technology based on a deep learning model called YOLOv8, integrated into a web-based application built with Python.

The system accepts input in the form of bite mark images, processes them through a classification stage to determine the gender. The development of the system includes training the model using a labeled dataset of 80 bite mark images, optimizing the model to run in a Python environment, and creating a web-based interface to make it easier for users to perform real-time gender identification.

The test results showed that the system was able to classify gender with an accuracy of 75.00% using 44 test images. In addition, integrating the system with a web application provides advantages in terms of portability and efficiency. This research is hoped to be the first step in developing an automatic forensic identification system based on bite marks.

Keywords: *Bitemark, Forensics, CNN, Genders, YOLOv8, Python, Image Processing*