

## **ABSTRACT**

*Crime or criminality is anything that violates the law. The crimes committed are also various, one of them is violence with bites. One way to identify the person who did crime is by identification. The expert in handling the bite mark identification process is dental forensics. This day bite mark identification still through a very long inefficient process. Therefore, they need a better system that can help them to solve criminal cases.*

*In the last research has been made a system to identification gender based on bitemark using Content-based Image Retrieval (CBIR) method and Learning Vector Quantization (LVQ) classification, but still have lack such as only using one parameter called intercanine, using pixel for the distance and still using manual cropping techniques. To solve this problem, image registration is used to adjust the test image with database image so that it can be proceed using Local Binary Pattern (LBP) method and Learning Vector Quantization (LVQ) classification.*

*This final project is designed to simplify gender identification process based on bite marks on criminal acts. System has performance with the greatest accuracy of 96,2% and computational time 94,452 seconds using 140 samples training data and 100 samples testing data. The existence of this system can be a comparison on gender identification based on bite marks using different methods and can be useful for dental forensic in identifying gender using bite marks pattern*

**Keywords:** *LBP, LVQ, Image Registration, Criminal, Bite Mark.*