

## ABSTRACT

Biometrics is one of the topics of research are constantly being developed in terms of implementation and the discovery of new biometric technology. Biometric technology was developed in order to have a high degree of accuracy that can be implemented in various fields. One is the introduction of biometric technology by finger vein or muscle, better known finger vein.

In the final project will be built through the vein recognition system of human finger vein. System built able to take a finger vein image of the veins, detecting the presence of venous vein is then able to recognize it based on the database. This is done after the process of feature extraction, image processing and processing of the finger vein veins. The method used is Template Matching.

Of the 90 images tested the system for the identification accuracy of 91.1% obtained with a threshold value of 0.4 with an average computing time of 0.028 seconds. While the FAR (False Acceptance Rate) and FRR (False Rejected Rate) respectively - also was 3.33% and 6.67%

**Key words:** image processing, biometrics, vein vein, Template Matching