

ABSTRACT

Lack of public concern about health problems such as high cholesterol is a serious problem. Lot of people don't recognize the symptoms of the high cholesterol, so when the cholesterol reached a level which is dangerous to our body system, people have to take huge action to prevent the cholesterol itself. High cholesterol can cause artery narrowing, constriction of blood vessels, and heart attack, therefore it needs an early prevention. With the image processing and expert system which is able to recognize the cholesterol symptoms through the eyelids, people would be able to early detect the cholesterol and do the prevention.

In this research will discuss the implementation of the image processing and expert system using SURF algorithm for extracting the image and K-MEANS clustering to classify the result from the previous algorithm. The users should input the symptoms which are created by the expert system algorithm, forward chaining and certainty factor, the system would calculate the value to take the conclusion, users also input the image which is cropped in 4:3 scale. This system provides the output, healthy eyelid or xanthelasma eyelid from the image processing and low, medium, high level from the expert system and.

Keyword : Cholesterol, SURF Algorithm, K-MEANS Algorithm, Image Processing, Expert System.