ABSTRACT

Cholesterol is a natural substance with the physical properties of fat but has a steroida group. High cholesterol levels will cause hypertension, coronary heart disease. Current cholersterol levels can be detected through blood sampling. With the development of technology, now cholesterol levels can be detected through iris image.

In this research resulted in cholesterol level detection application program with input of iris. First, the image is resized, convert to grayscale, and cropped by system. Then feature extraction is carried out by the fractal method which has characteristics that can explain dimensions in non integer. The final stage is classification using decision tree method because it can simplifying the complex decision process becomes more spesific.

At this research system can be used to detect a person's cholesterol levels through an image of iris. The image is classified to be 3, the iris image of the cholesterol risk, cholesterol, and not cholesterol. The image of iris used as much as 105, where 63 image for trained data and 42 image for the test data. The result is the accuracy 95.23%, precision 90.47%, recall 100% and time computation 40.04 ms.

Keyword : Cholesterol, Iris Image, Fractal, Decision Tree