

ABSTRACT

The heart is the most important organ in humans, work relentlessly to pump blood throughout the body. The heart pumps blood through the blood vessels to the entire body. There are various of heart disease most experienced people of the world, including in Indonesia, namely coronary heart. Coronary heart is cardiovascular disease caused due to narrowing and blockage of the coronary arteries. Doctors can detect whether there is a blockage that occurs but it requires a high level of precision and concentration

In this final project is calculated and classified a large percentage of narrowed coronary arteries that occurs in the deep veins of heart detected through medical records results in the form of video. These videos will be extracted into frames which are then detected darkest frame, filtering on an object, an object pixel count, and staining. The output of this system shows where the location of vessel blockage that occur and be colored appropriate to the magnitude of the constriction.

The results obtained from this final project is a system which capable of detecting and classify blood vessel narrowing heart produce a level of accuracy are 90%. The results obtained at conditions bwareopen threshold value of 5000, brightness value of 40, the angle of image a horizontal position, threshold value at 0.1, and the size of structuring element 2.

Keywords: coronary heart disease, coronary artery, threshold