

## ABSTRACT

Myocardial infarction is a disease that attacks the organs of the human body, namely the heart. Myocardial infarction or commonly known as a heart attack is the cessation of blood flow to the heart even if only for a moment, and it can cause death. According to the data center and information of ministry of health republic of Indonesia, myocardial infarction disease is the first deadly disease in Indonesia, reached 2.65034 million inhabitants in 2014. The second disease is heart failure by 530 068. 2 kind of this disease can arise due to many factors, among others, the modifiable risk factors are hypertension, diabetes, stress and so on.

How to diagnose the existence of myocardial infarction disease and heart failure any one of them is to read the charts on the electrocardiogram. In addition to the results of the blood pressure entering into the system using sphygmomanometer.

The system uses an Arduino Mega 2560 as the main controller of the entire system as a sensor detection and pulse detection sensors heartbeat. Then the results of detection sensors heart rate and blood pressure entered into the *fuzzy* logic that has been created that will result will be released into the LCD.

**Keywords :** myocardial infarction, hypertension, heart failure, electrocardiogram, *fuzzy* logic.