ABSTRACT

Non-contact thermometer is a tool that can measure the temperature of the human body without making direct contact. This tool can determine the temperature of the human body and whether the person is in a fever or not. The corona virus known as COVID-19 is a new type of virus that has never been identified to attack humans before. One way to prevent the spread of the corona virus is by measuring the body temperature of each visitor before entering the building or room.

The system on the automatic body temperature detection device in bulk uses the pi camera and the AMG8833 thermal camera. The image is processed using OpenCV, so this system only detects the temperature on the face. Face detection using haar cascade classifier method, temperature measurement using RGB image and IR image. This tool is simply placed at the entrance and detects the body temperature of visitors who pass through the door automatically and displays body temperature in real time on the available screen. If a visitor's body temperature is detected above the specified limit, then there is a sound indicator to notify the officers and so there is no potential for the spread of the corona virus.

The AMG8833 thermal camera can read the temperature optimally at a distance of 1 meter to 5 meters. The temperature reading accuracy of the AMG8833 thermal camera reaches 97.57%. Temperature readings on the AMG8833 thermal camera can be affected by differences in light intensity.

***Keywords**: Body Temperature Detector, AMG8833 Thermal Camera, Image Processing.*