ABSTRACT

Examination of the respiratory rate and body temperature are included in the calculation of the vital sign parameters used by the medical team to determine whether a person's condition is good or not. Researchers want to develop a method of checking body temperature that is easy to use by the general public and can display fast and precise results. During this pandemic, we are forced to reduce direct contact between humans with the aim of suppressing the exchange of viruses. From these conditions, researchers want to develop a body temperature measuring device with a non-contact method. This method is expected to reduce direct contact between humans and still get the results of body temperature measurements that can measure parameters to determine a person's condition. To get the value of measuring body temperature, researchers have an idea by combining changes in temperature using a thermal camera. For body temperature parameters, researchers observed the forehead by detecting changes in temperature and then calculating body temperature. To get the results, the researchers used the method of detecting the face area or called face recognition and then detecting the ROI point of the region of interest in the forehead area. In the observation of body temperature values obtained temperature values based on the location of data collection with a temperature of min. 25 °C while the max. 35.7°C. This difference in temperature will be carried out in the process of calculating body temperature values by the system created by the researcher. In the results of this study, it was found that the normal body temperature value module of around 36.5°C – 37.2°C can be used as a range of use with a distance of 60-120 cm with an error value of 1% if the distance is above 100 cm, so the results of This research can be implemented on a body temperature measuring device using the non-contact method.

Keywords : Breathing Rate, Body Temperature, Non-Contact Method ROI (Region of Interest, Thermal Camera UTi-260B, Logitec C270 Web Camera