ABSTRACT

Although current technological developments allow activities such as consultation or health checks through applications such as Halodoc and online job interviews, the fact is that height and weight measurements are still carried out manually. Therefore, many studies have attempted to find methods and algorithms to identify height (cm) and weight (kg).

Based on the fact that the measurement of height and weight has an important role in the field of health and various aspects of human life, as well as the development of technology that continues to move forward, further research in identifying better and more efficient methods and algorithms in measuring height and weight becomes a necessity, so in this study an approach to measuring height based on images using the pixel per metric method and weight using the calculation of body surface area which is expected to improve the accuracy and time inferencing of these calculations.

The calculation results are quite varied from each model used, the highest accuracy value of the four models is the Yolov4-tiny model with an accuracy of 98.82% for height measurement while for weight measurement which has the highest accuracy value is the Yolov4 model of 86.83%. The inferencing time obtained by Yolov3 has an average inferencing time of 3.34 seconds, while Yolov4 1.18 seconds and Yolov4-tiny 1.28 seconds.

KEYWORDS: area, body, computer, pixel, surface