ABSTRACT

The fulfillment of nutritional needs in terms of quantity and type is very important in helping the process of human growth and development. Efforts to improve the quality of human resources (HR) start from the fulfillment of basic human needs. Consuming nutritious food is one of the important factors to maintain a healthy lifestyle. To get nutritious food, you need the right composition. Currently, the process of calculating nutrients is still manual and inefficient. These problems created an idea to create a food detection application. The system designed has an input in the form of a food object which will produce an output in the form of detection of the type of food.

The program is designed using the YOLOv3 model which is displayed in the form of images and nutritional data on android. The results of the system using the YOLOv3 method produce a mean Averagae Precision (mAP) of 61.5% with an avg loss of 0.3526. The total images of eating that became the research of this task amounted to 500 images of each object, in this study there were 5 objects in the form of rice, eggs, grapes, bananas, broccoli. So the total number of images in this study is 2500 images.

The purpose of this Final Project is to make it easier to know the estimation of nutrients in food that must be consumed by detecting food in one shot and several types of food in one frame.

Keyword: *Objek Detection, YOLO,* Android.