ABSTRACT

Potential cattle in Indonesia has a very big opportunity, because Indonesian endemic cows enter ranks of the most qualified cows in the world. In determining the quality of the cow, weight is an important indicator. With weight, breeders can determine cow production and productivity. Determines the most common cow weight is to use the scales. However, the high price of the scales is wrong one inhibiting factor in starting a cattle farm business.

System which is designed using a cow image input from the side and output in the form of cow weight estimation. The purpose of this research is to make it easier for candidates breeders in determining the weight of the cow without using scales the price is relatively expensive.

The system that has been designed in the cow weight estimation application program requires input in the form of an image or image of a cow and produces output in the form weight and classification of cattle based on the weight of cattle obtained. Program the application implemented to estimate the weight of a cow is designed in MATLAB 2018a software uses the fractal method and the Decision classification Tree. In this final project, the system estimation accuracy rate is 81% with the root mean squared error value in the Schoorl formula calculation, getting 72.56277 results, winter 75.00148, and Denmark 69.11267. The average computation time was 0.3329 seconds. Accuracy and computation time obtained by the amount of training data as much as 47 images and the number of test data as many as 21 images.

Keywords: Fractal, Decision Tree, Cow Weight, digital image processing.