
Abstract

The activity of calculating coins and separating them manually is an inefficient and ineffective activity. The application of image detection technology in this automatic coin-counting tool aims to shorten the time of work. This tool uses edge detection technology with *Canny* method with the aim that the object in the image can be recognized and other supporting methods such as the Euclidean distance method to define the size of the coin image with a pixel unit, and users can know the amount of money in real-time using the Internet of Things concept with Google Spreadsheets platform using Google API. In its implementation the main controller used is Raspberry Pi 3b +. Image detection has been done in areas such as examples in agriculture, biomedical, and other industries, in this final task image detection is applied to detect Indonesian coins, in which the implementation will be used for charity boxes. This final task aims to implement image detection with *Canny* method for coin detection tools. Based on prototype testing, the implementation of the *Canny* method and its supporting methods on the coin image Detection Tool for the charity box results in optimal accuracy with an accuracy of 99.15%.

Keyword: raspberry pi, coin detection, coins, *Canny*, image processing
