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IMAGE PROCESSING BASED ON OBJECT POSITION DETERMINATION USING CONVOLUTIONAL NEURAL NETWORK METHOD

HENDRA SON SIMON
Student Number: 1621013

Abstract

Image processing or digital image processing of an object can be used as a control system. Image needed in this control system is not always the similar or adjustable to the needs of the system designed. This research implemented image processing on object position determination. To be able to determine position, it is necessary to do the classification of each position based on image. The Convolution Neural Network method is one of the appropriate methods in classifying the image processing-based position determination.

The system was designed using Raspberry Pi as a microcontroller processing of learning data machine learning with the help of the Pi camera as a reading sensor. The reading through the camera was used to identify object position according to the learning data. Machine learning system was sed in the form of tensorflow.

Reading and analysis results show the system can identify the position of an object from of the placement of the object. There is also error reading on the object because learning is adjusted to the data provided where the data provided is sorted manually by the writer.

Keywords: *Image Processing, Machine Learning, Raspberry Pi, Pi Camera, Tensorflow*