ABSTRACT

Parking area has become one of necessity of a company, both industrial and non industrial companies. It also becomes important part of almost all public places such as markets and supermarkets. Unarranged parking lot system which is, in other word, not properly arranged makes the customers or the drivers usually feel uncomfort to park their cars. This, in this research, the writer made a parking system which could make parking their vehicles easier.

Related to the mentioned problem before, a system which can be a solution of this problem is needed a system which can detect the availability of a parking space. The system needs an image processing from a camera. After that, the image processing is loaded and the system will do feature comparison. Right after the data are processed, the system will produce logic which is used for the next process in the whole system.

The system is the application of Computer Vision. The system will take the image processing by using an attached camera in the parking lot. An image processing will be processed to be a feature hog by using Histogram of Oriented Gradient (HOG) to detect the parking slot. With the image processing which is already changed into a feature hog, that changed image processing has vector value. This value will be compared with other image processing.

The result of the test showed that the optimal position from a camera to get an optimal result was in height of ± 6 meter pole with distance of ± 8 meter from parking slot followed by 93.33 % accuracy distance feature hog and by threshold 50 so that it could detect objects with percentage of 95%.

Key Words:*Smart Parking System, HOG feature, parking lot*