

## **ABSTRACT**

Parking space is one important means to be owned by a public place such as offices, campuses, shopping centers, and others. The extent of parking is still an obstacle for motorists to know where the parking slots are still vacant due to the availability of parking slots are usually in public places is simply a data without giving out the location of the parking slot. Therefore, it makes the rider must surround each parking lot to get a parking slot is empty.

At this final project has created a system for detecting the availability of parking slots based background subtraction. First of all testing image enhanced by the application of one of the image filter. The next image will be transformed into BW layer to facilitate analysis. The process of detecting the availability of parking slots come with the background subtraction, where the reference image will be reduced to the background image, and image information in order to be in the crop the image noise can be eliminated. Further determination of the availability of parking slots by using thresholding.

Tests on these systems using variation of parameters such as threshold bw value, the final threshold value, and variation of weather conditions. The best accuracy rate for car when the threshold bw is 0.25 and the final threshold is 90. For the motorcycle when the threshold bw is 0.15, and for night time condition using threshold value 0.1 and the final threshold is 60. And computation time for car is 0.337059 and for the motorcycle is 0.344887.

Key words : parking slot detection, background subtraction, thresholding.