

## ABSTRACT

Finding an empty parking lot takes a long time in a large parking area. To overcome this problem in this study, the detection of empty parking spaces will be used using the background subtraction method.

Background subtraction is the process of detecting objects by distinguishing between objects and backgrounds in an image. Furthermore, background subtraction goes through a thresholding process to draw the background border to black and the object to white, so that there will be a difference between the object and the background. Where in the detection process using a mockup from the parking lot with a ratio of 1: 60.

By conducting tests using the background subtraction method influenced by light, the greater the light intensity, the better the detection quality. To detect it also requires the exact threshold value obtained from the initial frame histogram values. So that the detection process in this study uses a threshold value of 40 with a light intensity of 944 lux, in order to get a percentage of 100% detection accuracy. In the use of this method must use a constant light intensity so that errors do not occur in the detection process.

**Keywords:** background subtraction, thresholding, camera, parking cell, background, object.