ABSTRACT

People who driving (especially motorists) should be very careful to avoid accidents. Many accidents in which the driver hit another vehicle from behind is made underlying this final. This system made on Android smartphones because on the number of sales of the Android smartphones. Hopefully car driver that already has the Android smartphones do not need to buy any additional devices.

In this final project designed and analyzed the system of the car features detection at the car in front of the driver by using the Local Binary Pattern (LBP) as features extraction method. With LBP methods, obtained features of the car. Features is obtained by comparing each pixel of the car image with neighbor pixels. Then the result of this comparison is the new values that will be created as the threshold. Threshold is used to identify the car. Once the car is identified, the system will give a sign with make a green box as big as a car listed on the display screen Android smartphones.

In this system, has a minimum accuracy of 26.67% during the night, the maximum operating distance of detection is 9 m and the minimum value of average fps is 2.88 fps using Android smartphone Samsung Galaxy GT-S5660.

Keywords: **Car Detection, Android Smartphones, Local Binary Pattern, Adaboost**