

## ***ABSTRACT***

### **Method of Localization Based on RSSI and Altimeter on Lot Parking Case**

Population growth has resulted in a significant increase in vehicle numbers. However, life in a metropolitan city with high mobilization, the timing of the parked vehicle is forgotten and wasted. Therefore, the author has a tool that can help private vehicle owners, especially cars, to more easily know the location of the car when parking on a land or parking lot. Then the owner of the vehicle will have a higher time efficiency.

In this final project is designed a simple tool that is easy to use by any parked vehicle owners, using mobile-based smart phones android owned car owners. This tool will connect to the car owner's smart phone via WiFi signal using Received Signal Strength Indicator (RSSI) as the determinant of each car's position. This tool is designed using several modules of the ESP8266 Module and the interconnected Altimeter to transmit data to the car owner's Android phone. If the data obtained from the signal received by the owner's phone over the WiFi network, the greater the power, the car's position is getting closer and vice versa. This tool can also know the position of the car if it is in a different floor with the owner, because this function is already known altitude position of the car.

In this final project, testing measure the measurement of this tool have 19,2% on the average error. The results of this study can be developed, in order to correct the deficiencies in this tool. This tool can be useful for the general public and has a high economic value in the market.

**Keywords:** *ReceivedSignal Strength Indicators (RSSI), Localization Methods, Altimeter*