

## **ABSTRACT**

*The car driver when going into or out of the house will open the gate first and close the gate again, it is enough to spend time the car driver. Therefore, it takes an automatic control device to open or close the gate.*

*Based on those needs, at the end of task created automatic gate control. This system uses the arduino microcontroller as the main device. Then with a second device WiFi module ESP866 as interface between the input a smartphone android with microcontroller. Users give input of an application android on smartphone. Next, WiFi module ESP8266 catch input signal to be transmitted to microcontroller arduino. Microcontroller arduino process input and work based input to control automatic gate with help of DC motor, a solenoid door lock and limit switch.*

*Design prototype of automatic gate is able to work as a system that expected. The distance connection WiFi maximum obtained in conditions without obstacle is 25 meters. The DC motor can rotate 2 directions, to open and close the gate. To open the gate, the time it takes DC motor is 0,06212 second with time delay response is 0,0125 second and to close the gate, the time it takes DC motor is 0,0619 second with time delay response 0,0125 second.*

**Keyword :** *Gate, WiFi module ESP8266, arduino, smartphone android, DC motor*