DEVELOPMENT OF A MONITORING ROBOT CAR USING A MICROCONTROLLER BASED PAN-TILT CAMERA

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ABSTRACT

In the era of technological developments that are increasingly advanced, one of which is robot technology which is a tool that can be used as a substitute for human tasks which has several advantages. One of these advantages is that it can be used in dangerous places or places that are at high risk for humans if they run it. In this case the author is interested in making a prototype in the form of a robot car with wireless control using completeness in the form of a mobile robot for the military and industrial fields with remote control (wireless) equipped with a pan-tilt camera. At this time the ESP32-Cam is given a current voltage of 5 Volts and the Motor Driver L298N 12 Volts. After the ESP32-Cam is active, the robot is in a standby state. While in this condition, the smart phone or computer that will be used must first be connected to the network that has been programmed on the ESP32-Cam. In the connected condition, the user then enters the appropriate IP address into the web server application. If it has been entered, the user gets full control access rights to the monitoring robot. Users only need to press the buttons available on the available applications. The WiFi network on the ESP32-CAM module can be connected to the robot control system with a maximum range of 45 M. If it exceeds the maximum distance, the robot will lose control and not be connected to the control system.

Keywords: *robotic car, monitor, ESP32-CAM, Pan-Tilt, wireless*