

DESIGN AND BUILD SMART RC CAR WITH WIRELESS ANDROID VOICE CONTROL AND OBSTACLE SENSOR BASED ON ARDUINO UNO

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ABSTRACT

The development of technology in the current era makes a lot of innovations in supporting people's lives. There are so many implementations of technology that we can encounter on a daily basis, such as in transportation technology where currently vehicles are more complete with advanced features supporting their mobility as a means of transportation as well as in terms of safety or security of the vehicle, not to mention the emergence of electric-powered transportation. towards the era of gas emission free. One of the vehicles with full features that is currently present in the community is the Tesla. This electric power-based vehicle is equipped with autonomous control technology that allows the vehicle to drive without being controlled by the driver, meaning the vehicle can drive by itself, controlling acceleration and maneuvering with intelligent controls in it. In this research, a prototype of a Smart RC Car with Wireless Android Voice Control and an Arduino Nano-based Obstacle Sensor was built whose main ability is to control vehicle maneuvers and acceleration with a voice or word control, this technology which will later support the performance of previously existing technologies. In addition, this system is also equipped with an obstacle sensor to detect an obstacle in front of the car and take the fastest action to avoid unwanted things. Based on the results of system testing, the success rate is 100% and the ultrasonic sensor error is 2%.

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