Smart Floor Cleaning Robot using Android App

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Abstract: *The contemporary household landscape is witnessing a paradigm shift towards enhanced intelligence and automation. The integration of home automation systems not only provides increased convenience but also affords individuals more time for other pursuits. This project endeavors to conceptualize and actualize a Vacuum Robot that operates autonomously andmanually through a designated mobile application. The Vacuum Cleaner Robot, utilizing components such as Arduino Mega, Arduino Shield, LDR Sensor, Real-Time Clock, Motor Shield L293D, Ultrasonic Sensor, and IR Sensor, aims to streamline the cleaning process, replacing manual vacuuming with an efficient automated solution. The primary objective of this initiative isto successfully design and implement a prototype Vacuum Robot that adheres to user-friendly criteria outlined in the aforementioned context.*

Keywords: Home Automation, Robotic Vacuum Cleaner, LDR Sensor, L293D, Android Phone, Arduino UNO, Floor Cleaning, ESP8266

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