

# **DESIGN AND CONSTRUCTION OF MICROCONTROLLER-BASED VERTICAL MOTORCYCLE PARKING PROTOTYPE**

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## **ABSTRACT**

*Parking area is a public facility which is an important part in a crowded area. The parking area has an important role to organize and collect piles, so that the existence of a parking area is expected to help and reduce the intensity of transportation congestion on the highway. Motorcycles as the majority of vehicles on the highway become the main commodity that requires parking space in several vital objects. Parking area in addition to requiring a large vacant land also requires good land management. There are so many parking lots that cannot accommodate the need for parking in a location due to poor management, so that the accumulation of vehicles is actually getting denser and creeping, such as in public places and shopping centers where there is a large accumulation of motorbikes, minimal land, and poor parking and management. Based on these conditions, an innovation is needed to utilize minimal land but can accommodate large needs, as well as parking information management which is also needed as a medium of information to the public based on the real conditions of parking. vertical with RFID tag access with prototype results has a success rate of 100% in terms of system function and performance.*

**Keywords :** *Vertical parking, NodeMCU ESP8266, RFID Parking*