

# **DESIGN OF SECURITY EQUIPMENT ON MOTORCYCLES USING IOT-BASED FINGERPRINT AND RFID**

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## **ABSTRACT**

*The development of the automotive world so far has not provided maximum vehicle security from theft, especially on motorbikes in the city of Lampung. Security is meant here is from the motor ignition. But apparently still can uprooted in a short time. Therefore we need a security system on an RFID-based motorbike with an IoT-based Fingerprint backup as a tool to connect the electric current to the motorbike. RFID and Fingerprint are used for input connecting the electric current to the motor through a relay, if the RFID card is not read the buzzer will sound 3 times as a notification that the card is not suitable or someone wants to steal it. If the RFID card is read, the buzzer will sound 1 time as a notification that the motor's electricity is connected. Based on the tests that have been carried out, it is known that the RFID card will be read with an RFID reader if it is less than 3cm. While more than 3cm the card will not be read. All process results will be displayed on the Blynk application. The accuracy of the tool is 93%. In testing the entire tool, 15 different scenarios were carried out with a success rate of 93%. Failure can occur on the Fingerprint because the light intensity is too high or the placement of the fingerprint does not match the Fingerprint.*

**Keywords:** *Motorcycles, RFID cards, RFID readers, Fingerprint, IoT*