ABSTRACT

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AUTOMATIC GATE BASED ON INTERNET OF THINGS (IoT): RFID SENSOR AS A SOLUTION FOR AUTOMATIC ACCESS AND NOTIFICATION DELIVERY VIA TELEGRAM

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The automatic gate system is an application of RFID technology to open gates automatically and enhance user convenience. The purpose of this research is to design and develop a system that can improve the efficiency of home gate access and provide real-time notifications to users. The RFID sensor authenticates users, while the ultrasonic sensor detects obstacles around the gate. When a user is detected by the RFID sensor, the gate will open automatically with the help of a servo motor, and a buzzer will sound as an operational indicator. Additionally, this system is connected to the Telegram application, allowing real-time notifications about gate access status. Testing shows that the system functions well under various conditions and significantly improves user convenience. The results of this research demonstrate that integrating RFID and IoT technology can be an effective solution in developing an automatic gate system.
Bibliography (2018-2022)