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IoT BASED ELECTRIC BIKE SMART SYSTEM FOR SPEED MONITORING AND ACCIDENT PREVENTION

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Abstract

The increasing demand for eco-friendly transportation has led to the development of electric bikes. However, the safety of these bikes is a major concern. This research paper proposes a system that monitors the speed of electric bikes, detects fire, and alerts the owner in case of an accident. The system uses an IR sensor to measure the speed of the bike by counting the number of pulses in one minute, which is then converted to km/h and displayed on the Blynk app. If the bike crosses the threshold speed, the owner receives a notification. The fire detection system uses a flame sensor that detects the presence of fire and disconnects the battery circuit, preventing any further damage. The owner is notified of the fire through an email. The accident detection system uses a vibration sensor that detects sudden bike vibrations, which are considered as accidents. The owner is notified of the accident through a notification. The proposed system ensures the safety of the electric bike and the rider, making it a reliable and efficient mode of transportation.

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