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(57) Abstract :
The present invention discloses a cloud-enabled system for monitoring and controlling electric consumption using Passive Infrared (PIR) and ultrasonic sensors. The system comprises PIR sensors to detect motion, ultrasonic sensors to measure occupancy, and an energy meter to track electricity usage. A microcontroller processes data from these sensors and communicates with a cloud server, which hosts AI algorithms that analyze energy consumption patterns and optimize usage in real-time. The system can adjust appliance operation based on occupancy, reducing energy wastage and improving efficiency. It also features a user interface for manual control and monitoring of energy data. By integrating IoT technology, machine learning, and cloud computing, the system provides intelligent energy management, leading to reduced electricity consumption, lower costs, and enhanced sustainability. Accompanied Drawing [Fig. 1]

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