Smart Shopping Cart using ESP

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Abstract*: The "Smart Shopping Cart" project represents a cutting-edge solution aimed at revolutionizing the traditional shopping experience through the integration of advanced technologies. Focused on the ESP32 microcontroller, this innovative shopping cart incorporates a sophisticated array of sensors, including IR and ultrasonic sensors for human detection and tracking, RFID technology for product identification and automatic pricing, and load cells for precise weight monitoring. A DC motor, coupled with a motor driver IC, ensures seamless cart movement, while a user-friendly display module provides real-time feedback on the cart's status. This project not only showcases autonomous cart navigation but also introduces features like automated pricing and overload alerts, promising to redefine and elevate the efficiency and enjoyment of modern retail shopping.*

Keywords: Shopping Cart, ESP32, Sensor Integration, RFID Technology, Automated Pricing

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