

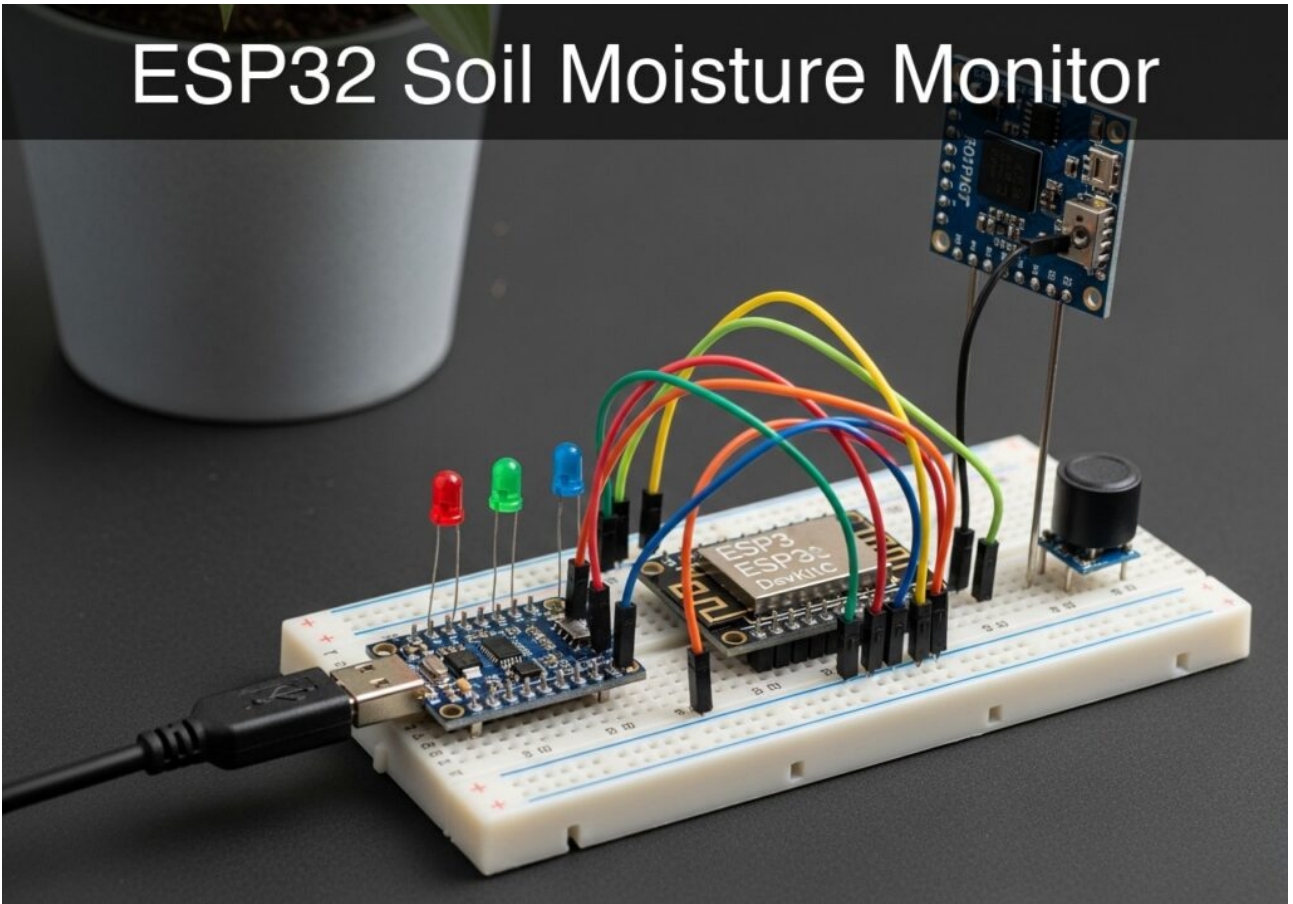
Practical case: ESP32 BLE Presence Beacon



A standalone Bluetooth Low Energy BLE room presence beacon that broadcasts occupancy status, toggled via a physical pushbutton and displayed locally via a...

Practical case: ESP32 Soil Moisture Monitor

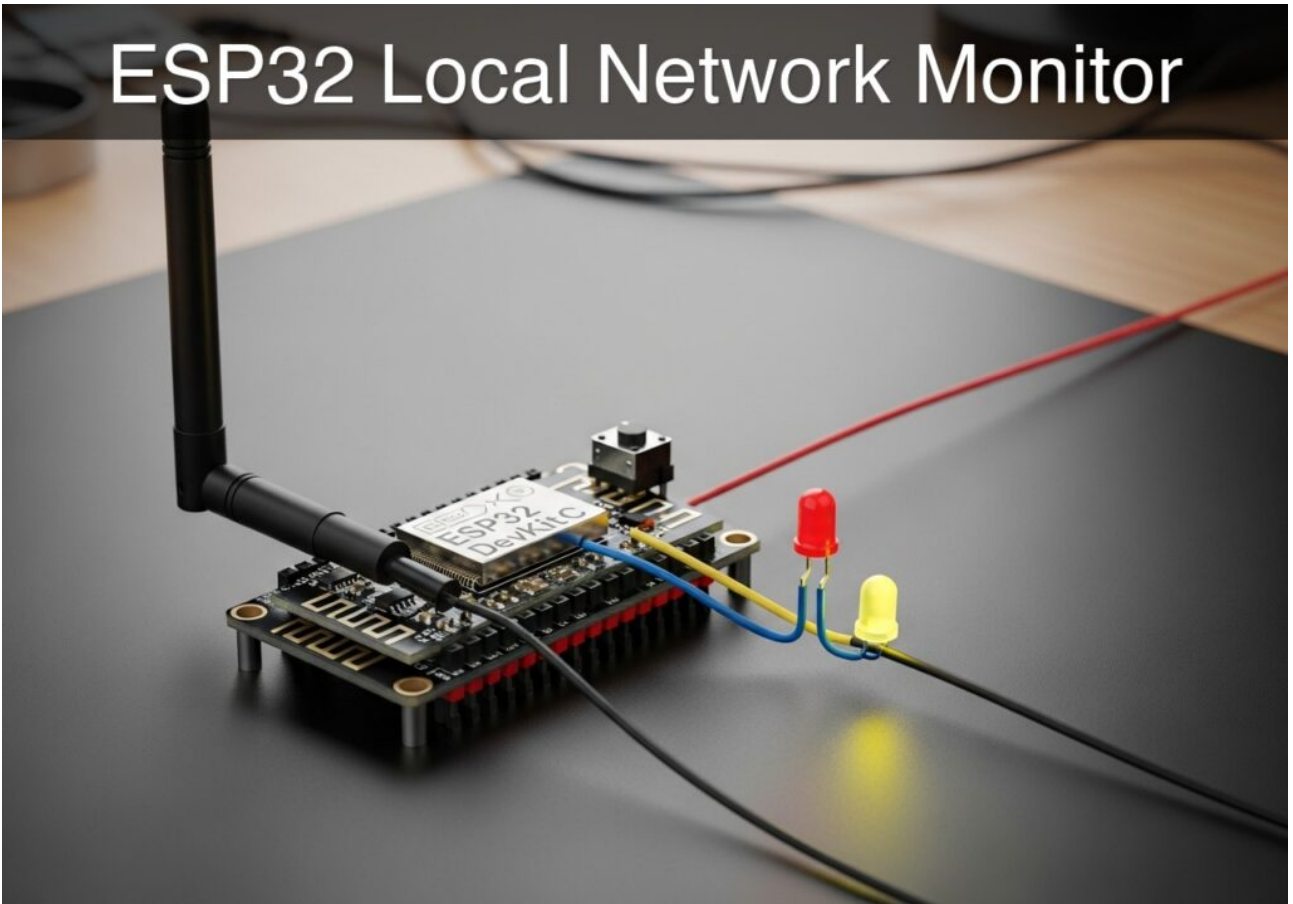
ESP32 Soil Moisture Monitor



A continuous plant hydration monitor that measures soil moisture using an analog capacitive sensor, triggering local visual and audible alerts when watering...

Practical case: ESP32 Local Network Monitor

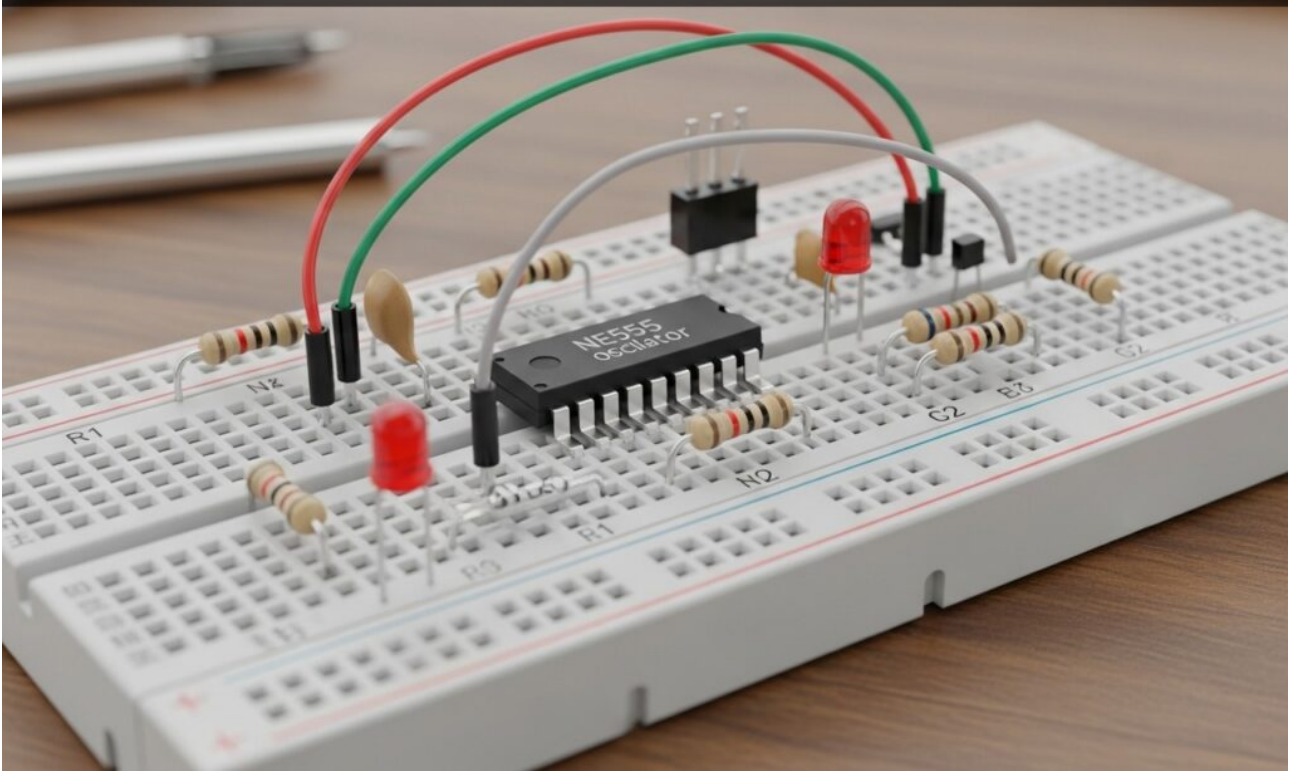
ESP32 Local Network Monitor



A standalone Field Technician's Local Network Monitor using an ESP32 configured as a Software Access Point SoftAP . It broadcasts a secure, localized Wi-Fi...

Practical case: astable oscillator with NE555

Astable oscillator with NE555



Level: Basic — Build an NE555 astable timer that blinks an LED at a visible frequency.

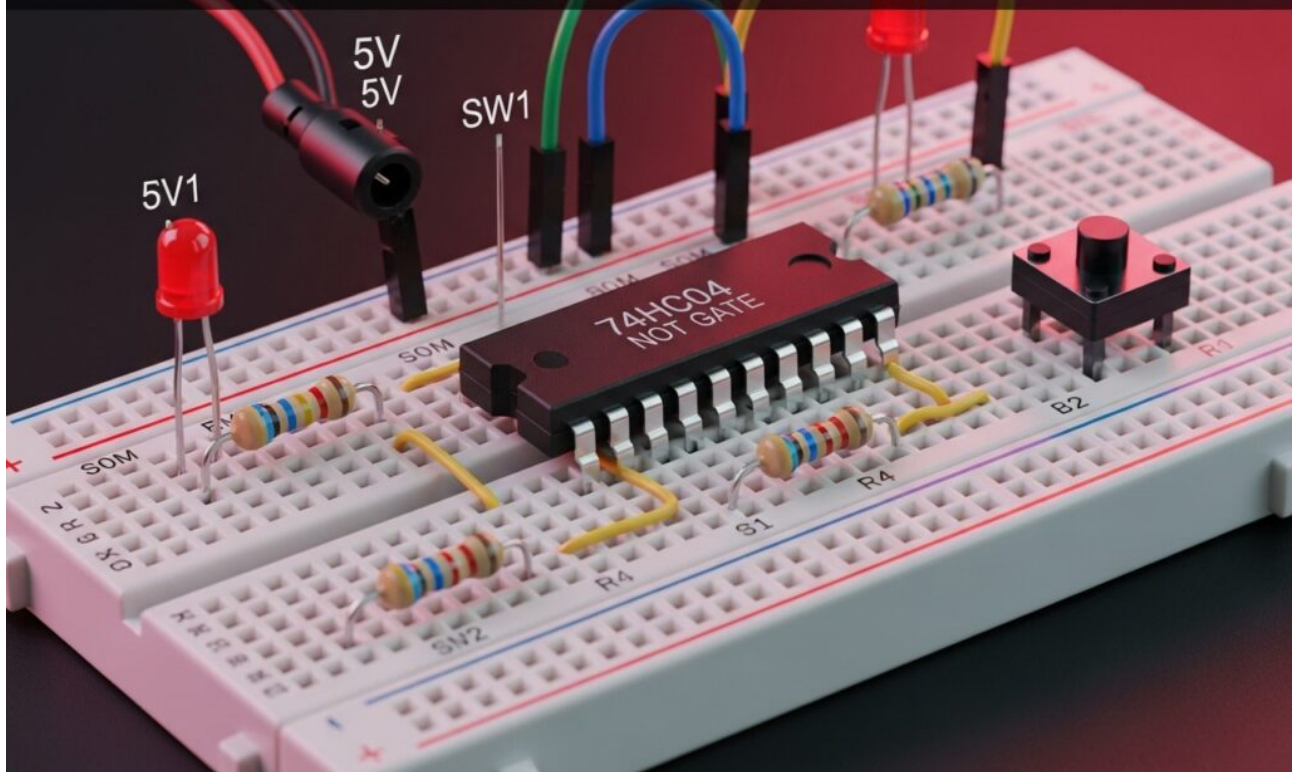
Practical case: One-Shot Timer Using NE555

[illegible]

Level: Basic - Build a monostable timer circuit using the NE555 IC to control an LED output for a set duration.

Practical case: Standby mode indicator

Standby mode indicator



Level: Basic - Understand logical inversion using a NOT gate to activate a standby LED when the main system turns off.