#include <WiFi.h>

#include <WiFiClientSecure.h>

#include <UniversalTelegramBot.h>

#include <esp\_camera.h>

// Replace with your Wi-Fi credentials

const char\* ssid = "YOUR\_WIFI\_SSID";

const char\* password = "YOUR\_WIFI\_PASSWORD";

// Telegram bot token and chat ID

#define BOT\_TOKEN "YOUR\_BOT\_TOKEN"

#define CHAT\_ID "YOUR\_CHAT\_ID"

// PIR sensor pin

#define PIR\_PIN 13

WiFiClientSecure client;

UniversalTelegramBot bot(BOT\_TOKEN, client);

bool motionDetected = false;

unsigned long lastDetectionTime = 0;

void startCamera() {

camera\_config\_t config;

config.ledc\_channel = LEDC\_CHANNEL\_0;

config.ledc\_timer = LEDC\_TIMER\_0;

config.pin\_d0 = 5;

config.pin\_d1 = 18;

config.pin\_d2 = 19;

config.pin\_d3 = 21;

config.pin\_d4 = 36;

config.pin\_d5 = 39;

config.pin\_d6 = 34;

config.pin\_d7 = 35;

config.pin\_xclk = 0;

config.pin\_pclk = 22;

config.pin\_vsync = 25;

config.pin\_href = 23;

config.pin\_sscb\_sda = 26;

config.pin\_sscb\_scl = 27;

config.pin\_pwdn = 32;

config.pin\_reset = -1;

config.xclk\_freq\_hz = 20000000;

config.pixel\_format = PIXFORMAT\_JPEG;

config.frame\_size = FRAMESIZE\_VGA;

config.jpeg\_quality = 10;

config.fb\_count = 1;

// Initialize camera

esp\_err\_t err = esp\_camera\_init(&config);

if (err != ESP\_OK) {

Serial.println("Camera init failed");

return;

}

}

void setup() {

Serial.begin(115200);

pinMode(PIR\_PIN, INPUT);

delay(1000);

// Connect to Wi-Fi

WiFi.begin(ssid, password);

Serial.print("Connecting to WiFi");

while (WiFi.status() != WL\_CONNECTED) {

delay(500);

Serial.print(".");

}

Serial.println("\nWiFi connected");

Serial.println(WiFi.localIP());

// For Telegram SSL

client.setInsecure();

startCamera();

}

void loop() {

int pirState = digitalRead(PIR\_PIN);

if (pirState == HIGH && !motionDetected) {

motionDetected = true;

Serial.println("Motion detected!");

// Delay to allow image stabilization

delay(2000);

camera\_fb\_t \*fb = esp\_camera\_fb\_get();

if (!fb) {

Serial.println("Camera capture failed");

return;

}

// Send photo via Telegram

bot.sendPhoto(CHAT\_ID, "image/jpeg", fb->len, fb->buf, "Motion Detected!");

esp\_camera\_fb\_return(fb);

lastDetectionTime = millis();

}

if (motionDetected && millis() - lastDetectionTime > 10000) {

motionDetected = false; // Reset after 10 seconds

}

}