

Home Security System

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Overview:

- Our Home Security System consists of 3 components:
 - When motion is detected:
 - 1. Take a photo and save it to a MicroSD card.
 - 2. Send a notification to a designated smartphone.
 - 3. Alarm sound plays from speaker.

1



2



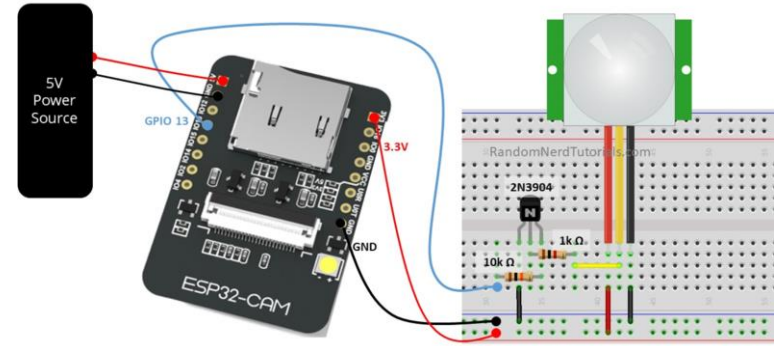
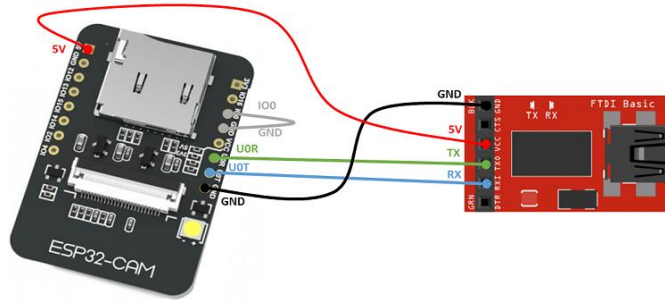
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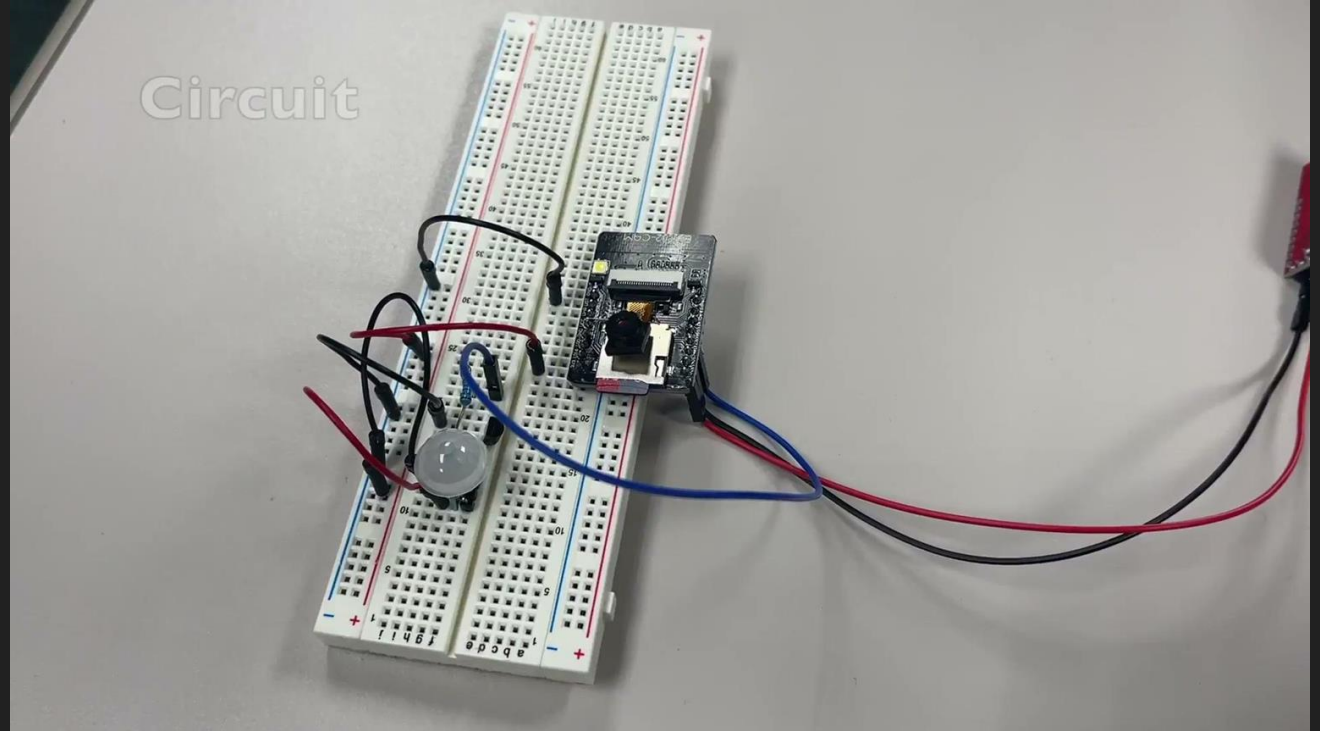
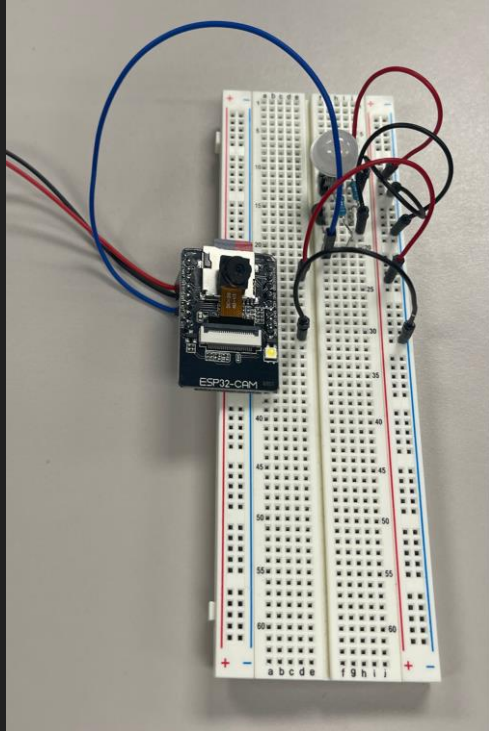
Major Components Needed:

Item	Quantity
PIR Motion Sensor	3
ESP32 Camera	1
MicroSD Card	1
Arduino Uno	1
Speaker	1
Telegram App	1
Arduino Nano	1
DFPlayer Mini MP3	1

Circuit 1: Photo Capture



Circuit 1: Photo Capture Demo



Circuit 2: Smartphone Push Notifications

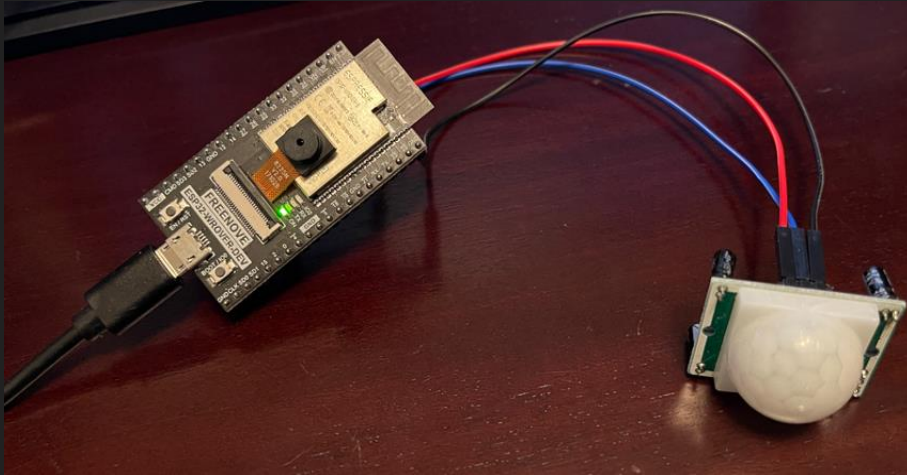


Telegram

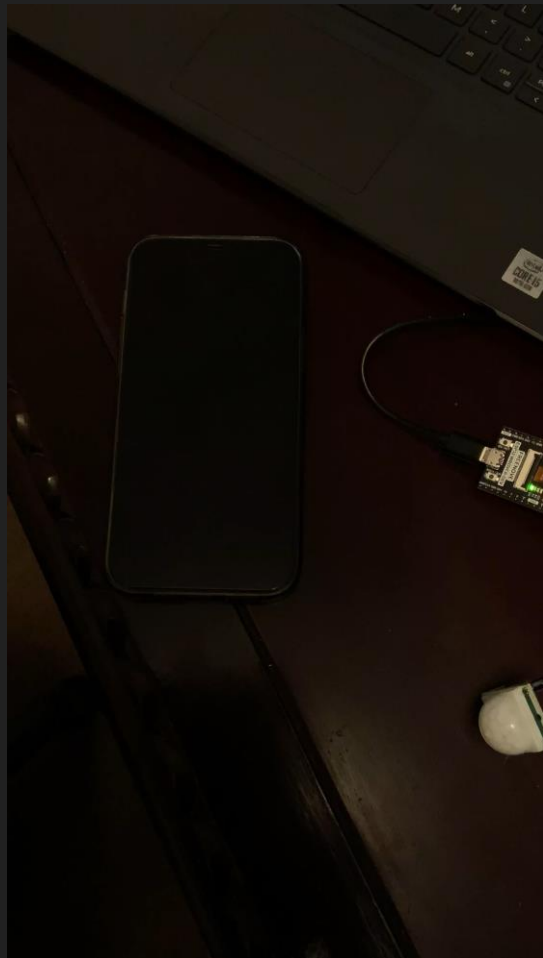
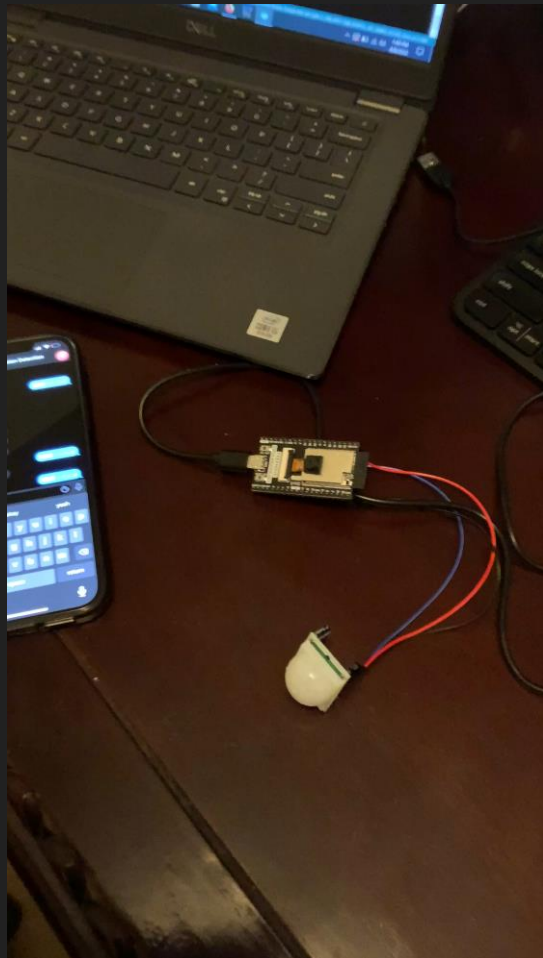
- Cloud-based instant messaging and voice over IP service
- Create bots to interact with
- Third-party apps users can interact with by sending messages, commands, and inline requests



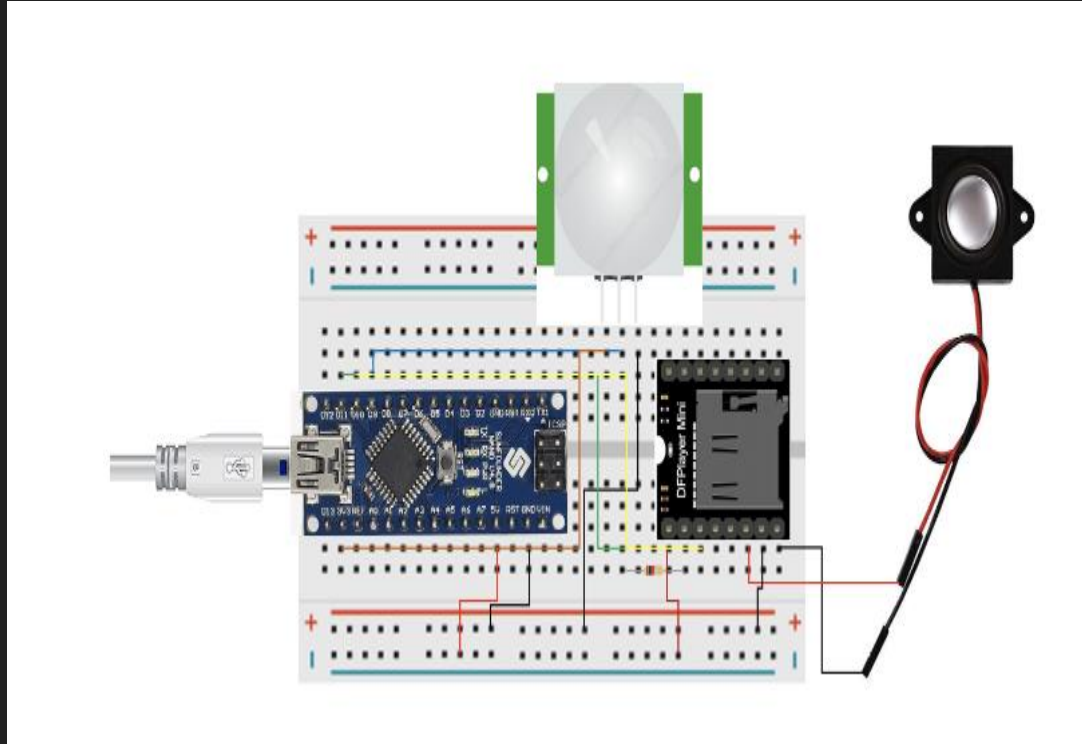
Circuit 2: Smartphone Push Notifications



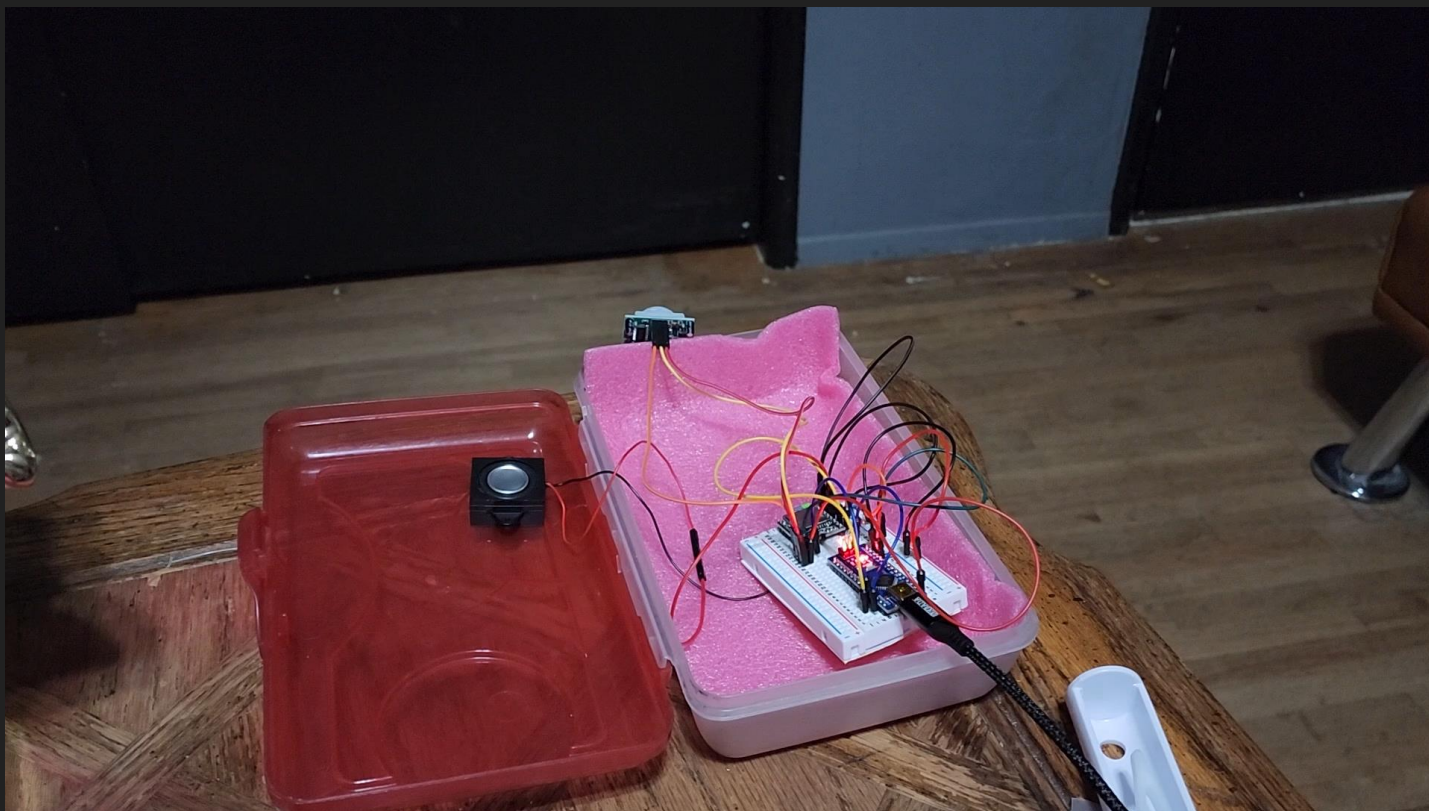
Demo



Circuit 3: Alarm



Circuit 3: Alarm Demo



Future Implementations:

- Incorporate all three components into one circuit
- Auto dialer function that can be customized to call either the homeowner or the authorities
- Photo capture sends with the smartphone push notification rather than storing in a MicroSD Card.