

Echipa 1

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Aprinderea/stingerea unui led si capturarea unei imagini la detectarea unei miscari.

Descriere: Cu ajutorul unui senzor PIR se detecteaza miscarea si se trimite aceasta informatie catre Raspberry Pi. Atunci cand miscarea este detectata, se aprinde un led si apoi se deschide camera web care face o poza, urmand ca dupa aceea aceasta sa fie salvată in calculator.

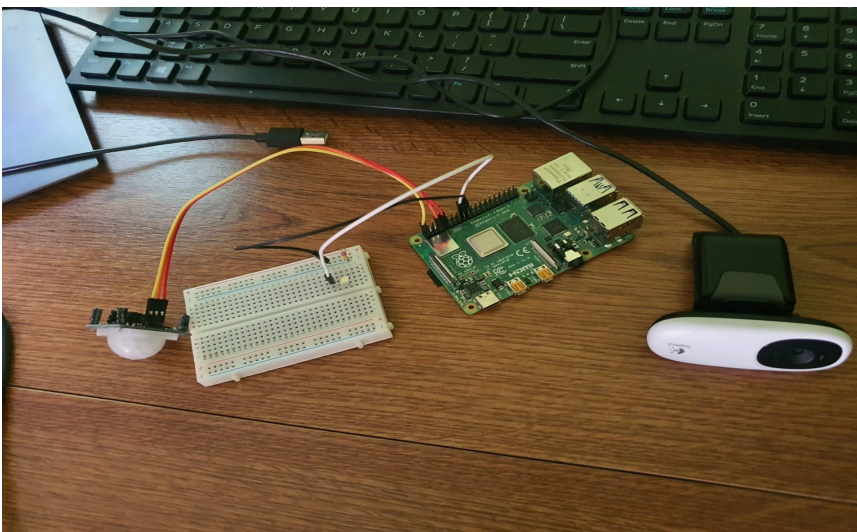
Componente hardware:

- Raspberry Pi 4 model B
- Alimentator
- Senzor PIR
- Led
- Breadboard si fire de legatura tata-tata
- 1 rezistor
- Camera web Logitech

Aplicatii:

- Raspbian OS

Imagine:



Cod:

webcam.sh

```
#!/bin/bash
#comanda cu ajutorul careia fac poza atunci cand se deschide camera
fswebcam -r 1280*720 -S 20 /home/pi/Desktop/proiectSM/image.jpg
```

main.py

```
import RPi.GPIO as GPIO
import os
import sys
import time
import subprocess

SENSOR_PIN = 11
ledPin=18

#dezactivez warningurile
GPIO.setwarnings(False)
GPIO.setmode(GPIO.BOARD)

#setez canalele
GPIO.setup(ledPin, GPIO.OUT)
GPIO.setup(SENSOR_PIN, GPIO.IN)

try:
while True:
signal = GPIO.input(SENSOR_PIN)
if signal == 0:
print("Nothing")
time.sleep(0.1)
elif signal == 1:
print("Intruders detected")
print("LED on")
GPIO.output(ledPin, GPIO.HIGH)
time.sleep(3)
os.system('/home/pi/Desktop/proiectSM//webcam.sh')
print("LED off")
GPIO.output(ledPin, GPIO.LOW)
time.sleep(5)
```

```
except:  
GPIO.cleanup()
```

Video [>aici<](#)