Date: September 10, 2015

DO IT YOURSELF BURGLAR ALARM

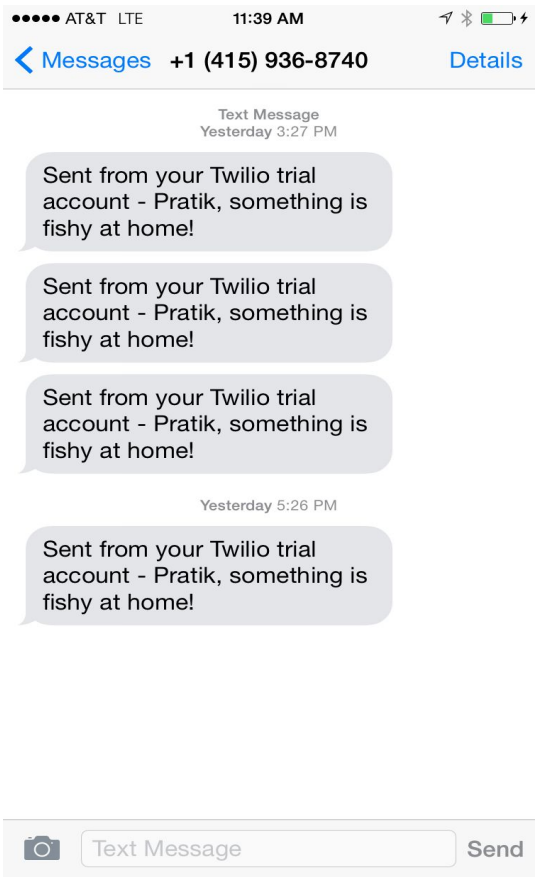
CSC 895: Applied Research Project, Fall 2015

Objective: Implement notification using Twilio Rest API for intrusion detected by Arduino with the help of sensor.

Requirements:

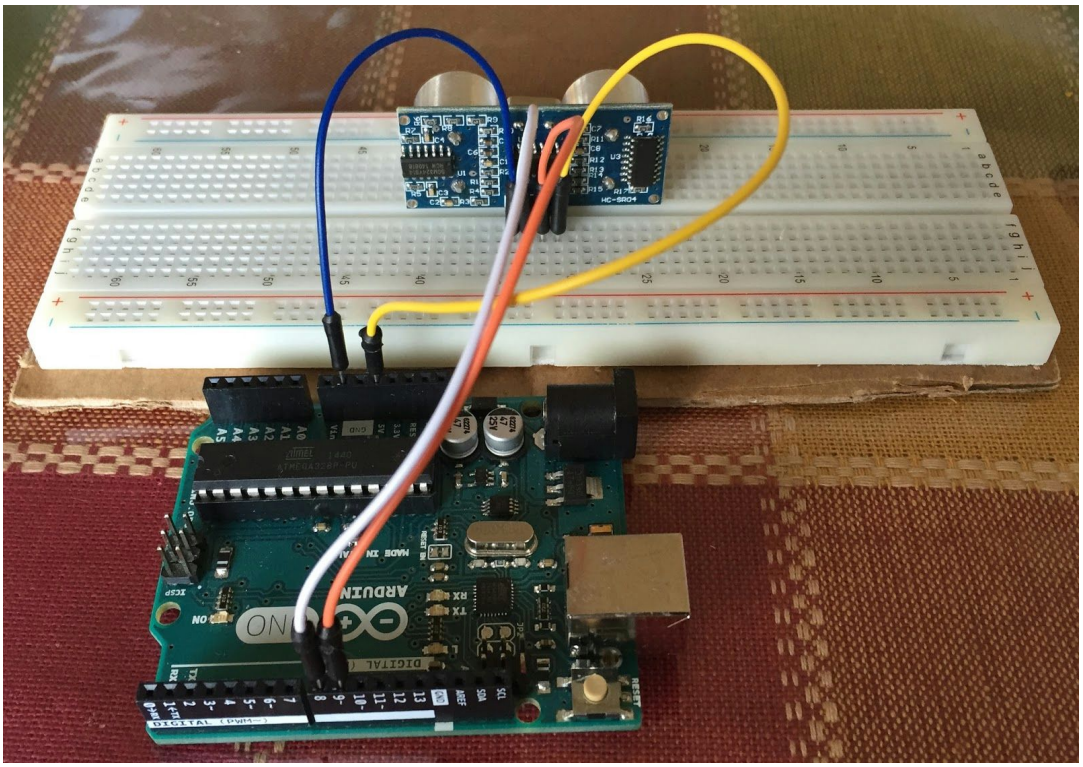
1. Python
2. Arduino
3. Ultrasonic Sensor
4. Python Library Pyserial Installed
5. Breadboard
6. Jumper Wires

Notification Sample:



SET IT UP:

1. Attach Vcc on the ultrasonic sensor to 5V on the Arduino
2. Attach GND on the ultrasonic sensor to GND on the Arduino
3. Attach TRIG pin on the ultrasonic sensor to DIGITAL pin 9 on the Arduino
4. Attach ECHO pin on the ultrasonic sensor to DIGITAL pin 8 on the Arduino
5. We will be using an on board LED light that is connected to DIGITAL pin 13 by default.



UPLOAD THE SKETCH:

1. Plug your Arduino into your computer
2. Open the Arduino_Burglar_Alarm.ino sketch with the Arduino IDE
3. Select your serial port (Tools>Serial Port) and click Upload.

Your Arduino LED will now be blinking. This means the ultrasonic sensor is in calibration mode.

SETUP THE SERVER:

1. Open server.py with a text editor
2. Tweak the value of SERIAL_PORT to the serial port you set in the Arduino IDE.
    a. Windows: It might look like COM2
    b. MAC systems: it might look like /dev/tty.usbserial621
3. Change the value of SMS_FROM to the number in your Twilio Account Numbers
4. Change the value of SMS_TO to your cell phone
5. Change the value of TWILIO_ACCOUNT_SID to your Account SID as found at your TWILIO dashboard
6. Change the value of TWILIO_TOKEN to your Account Token as found at your TWILIO dashboard

RUN SERVER:

1. Open up your terminal and run server.py with “python server.py”

2. Arduino will blink LED in the beginning for calibration phase.

3. Get out of the sensor light while it calibrates.

4. Whenever motion is detected by the sensor, server.py will send a notification on the Android phone.

SOURCE CODE:

Source code can be found out at:
https://github.com/jpratik21/Notification_Twilio_Arduino

Thanks!