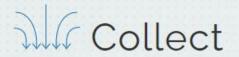
Thingspeak and Pi

DAY 1 - SESSION II

About ThingSpeak

ThingSpeak is an IoT analytics platform service that allows you to aggregate, visualize, and analyze live data streams in the cloud. You can send data to ThingSpeak from your devices, create instant visualization of live data, and send alerts.



Send sensor data privately to the cloud.



Analyze and visualize your data with MATLAB.



Trigger a reaction.

Create a Channel

Create New Channel and Fields

https://api.thingspeak.com/update?api_key=6ULNQU9EZKJJFGUR&field1=0

https://api.thingspeak.com/update?api_key=6ULNQU9EZKJJFGUR&field2=1

Update Channel using Python

```
from gpiozero import Button
from signal import pause
import requests
button = Button(21)
def say_red():
  print('red')
  x = requests.get('https://api.thingspeak.com/update?api_key=6ULNQU9EZKJJFGUR&field3=0')
def say_green():
  print('green')
  x = requests.get('https://api.thingspeak.com/update?api_key=6ULNQU9EZKJJFGUR&field3=1')
button.when_pressed = say_green
button.when_released = say_red
pause()
```

Send CPU Temperature to ThingSpeak

```
import psutil
import requests
from time import sleep
while True:
    x = psutil.sensors_temperatures()
    temp = x['cpu\_thermal'][0][1]
    x1 =
requests.get('https://api.thingspeak.com/update?api_key=6ULNQU9EZKJJFGUR&field1='+str(temp))
    print(temp)
    sleep(60)
```

Send Mail

```
$ export EMAIL_USER= <u>iotsatish25@gmail.com</u>
```

```
$ export EMAIL_PASS = "enter your password "
```

Python Program

import smtplib, ssl from email.message import EmailMessage import os EMAIL_ADDRESS = os.environ.get('EMAIL_USER')

EMAIL_PASSWORD = os.environ.get('EMAIL_PASS')

```
msg = EmailMessage()
msg['From'] = "iotsatish25@gmail.com"
msg['To'] = "tcs.satish@gmail.com,theiotusersclub@gmail.com"
msg['Subject'] = 'IoT Check Alert'
msg.set_content('This is a plain text email')
```

with smtplib.SMTP_SSL('smtp.gmail.com', 465) as smtp: smtp.login(EMAIL_ADDRESS, EMAIL_PASSWORD) smtp.send_message(msg)