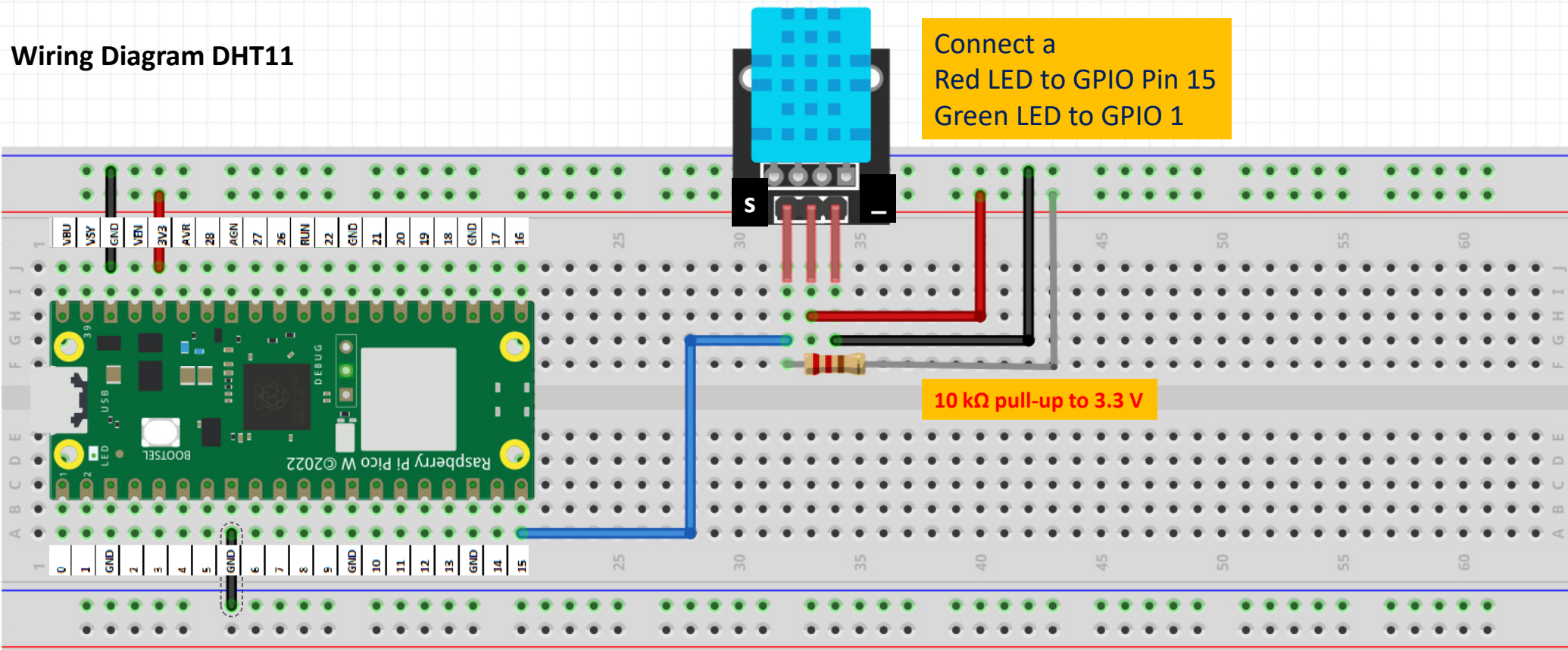


Wiring Diagram DHT11



Connect a
Red LED to GPIO Pin 15
Green LED to GPIO 1

10 kΩ pull-up to 3.3 V

```
wificonfig.py x
1 ssid='ASUS'
2 password='Study090317'
3
4 whatsapp_phone_no="6591080064"
5 whatsapp_api_key="5854910"
6
```

wificonfig.py should contain your access point ssid/password
And Whatsapp API key and the Phone number you used to register

```
Traceback (most recent call last):
  File "<stdin>", line 41, in <module>
  File "dht.py", line 1, in measure
OSError: [Errno 110] ETIMEDOUT
```

If you see this error message in the shell. Plug out the usb cable and
Reconnect the pico again.

Demo Whatsapp Alert

dht11_whatsapp.py

Practical Application : Monitoring an Event

Creating a Thingspeak Account

Signing up for a **ThingSpeak** account is straightforward. Here's a step-by-step guide:

Step 1: Go to the ThingSpeak website

Open your browser and go to:

<https://thingspeak.com> ↗

Step 2: Click "Sign Up"

- On the top right corner of the homepage, click **Sign Up**.
-

Step 3: Fill in your information

- **Name:** Your full name or nickname
 - **Email:** Your valid email address
 - **Username:** Choose a unique username
 - **Password:** Set a secure password
 - Accept **Terms of Service** and **Privacy Policy**
-

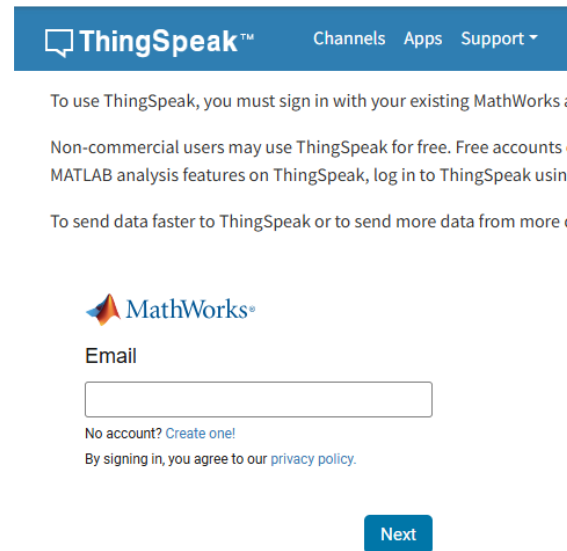
Step 4: Verify your email

- After signing up, ThingSpeak will send a **verification email**.
 - Open your email inbox, find the email from ThingSpeak, and **click the verification link**.
-

Step 5: Log in

- Return to <https://thingspeak.com> ↗
- Click **Log In** and enter your username/email and password.

Go to:
<https://www.thingspeak.com/login>




The screenshot shows the ThingSpeak login interface. At the top is a blue navigation bar with the ThingSpeak logo, 'Channels', 'Apps', and 'Support' with a dropdown arrow. Below the bar, there are three lines of text: 'To use ThingSpeak, you must sign in with your existing MathWorks ac', 'Non-commercial users may use ThingSpeak for free. Free accounts of MATLAB analysis features on ThingSpeak, log in to ThingSpeak using', and 'To send data faster to ThingSpeak or to send more data from more de'. The MathWorks logo is centered below the text. Under the logo is the label 'Email' and a text input field. Below the input field are two links: 'No account? Create one!' and 'By signing in, you agree to our privacy policy.' At the bottom right is a blue 'Next' button.

ThingSpeak™ Channels Apps Support ▾

To use ThingSpeak, you must sign in with your existing MathWorks ac

Non-commercial users may use ThingSpeak for free. Free accounts of MATLAB analysis features on ThingSpeak, log in to ThingSpeak using

To send data faster to ThingSpeak or to send more data from more de

 MathWorks®

Email

No account? [Create one!](#)

By signing in, you agree to our [privacy policy](#).

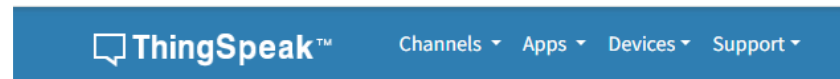
Next

Logging into Thingspeak

Enter the email address you used to create the account and click the [Next] button.

Enter your password and click [Sign In] to access Thingspeak

Creating a Thingspeak Channel



My Channels

New Channel

Search by tag

Click [New Channel]

New Channel

Name

Description

Field 1 ☒

Field 2 ☐

Field 3 ☐

Field 4 ☐

Field 5 ☐

Field 6 ☐

Field 7 ☐

Field 8 ☐

Give it a name and
provide some
description

Create the data fields
you are collecting for
visualization.

E.g.

Field 1 = Temperature

Field 2 = Humidity

Creating a Thingspeak Channel

Show Channel Location☐

Latitude

0.0

Longitude

0.0

Show Video☐

☒ YouTube

☐ Vimeo

Video URL

http://

Show Status☐

Save Channel

Save the Channel

ser

Set as default

ThingSpeak™

Channels ▾ Apps ▾ Devices ▾ Support ▾

New Channel

Name

Tampines Regional Library

Description

Monitoring Temp and Humidity

Field 1

Temperature

☒

Field 2

Humidity

☒

Field 3

☐

Getting the Channel API And API key

ser [Set as default](#)

ThingSpeak™ Channels ▾ Apps ▾ Devices ▾ Support ▾ Commercial Use

Tampines Regional Library

Channel ID: **3195084**
Author: [iamssgoh](#)
Access: Private

Monitoring Temp and Humidity

Private View Public View Channel Settings Sharing API Keys Data Import / Export

[+ Add Visualizations](#) [+ Add Widgets](#) [Export recent data](#) [MATLAB Analysis](#) [MAT](#)

Channel Stats

Created: ~~less than a minute ago~~
Entries: 0

Field 1 Chart [↗](#) [💬](#) [✎](#) [✕](#)

Temperature

Tampines Regional Library

Field 2 Chart [↗](#) [💬](#) [✎](#) [✕](#)

Humidity

Tampines Regional Library

Select API keys

Getting the Channel API And API key

Write API Key

Key

5Q0JYI80IP1076ES

Generate New Write API Key

Read API Keys

Key

JE05TQA5S6N9PIQ2

Note

Save Note

Delete API Key

API Requests

Write a Channel Feed

GET https://api.thingspeak.com/update?api_key=5Q0JYI80IP1076ES&field1=0

Read a Channel Feed

GET https://api.thingspeak.com/channels/3195084/feeds.json?api_key=JE05TQA5S6N9PIQ2

```
request = urequests.post( http://api.thingspeak.com/update?api\_key=' + THINGSPEAK\_WRITE\_API\_KEY, json = readings, headers = HTTP_HEADERS )
```

Save API keys to wificonfig.py

wificonfig.py

```
1 ssid='ASUS'
2 password='Study090317'
3
4 whatsapp_phone_no="6591080064"
5 whatsapp_api_key="5854910"
6
7 mailjet_api_key="8e1996475f43d56c0a186b9ab65394fb"
8 mailjet_secret_key="d8586c5c77b4962c226e5c490078a03f"
9 email_address="iamssgoh@gmail.com"
10 email_sender="ssgoh"
11
12 thingspeak_write_api="5Q0JYI80IP1076ES"
13 thingspeak_read_api="JE05TQA5S6N9PIQ2"
14
15 |
```

```
24
25 HTTP_HEADERS = {'Content-Type': 'application/json'}
26 THINGSPEAK_WRITE_API_KEY = wificonfig.thingspeak_write_api
27
```

Visualization

ThingSpeak™

Channels ▾ Apps ▾ Devices ▾ Support ▾

Comments

Channel ID: **3195084**

Author: **iamssgoh**

Access: Public

Monitoring Temp and Humidity

Private View

Public View

Channel Settings

Sharing

API Keys

Data Import / Export

+ Add Visualizations

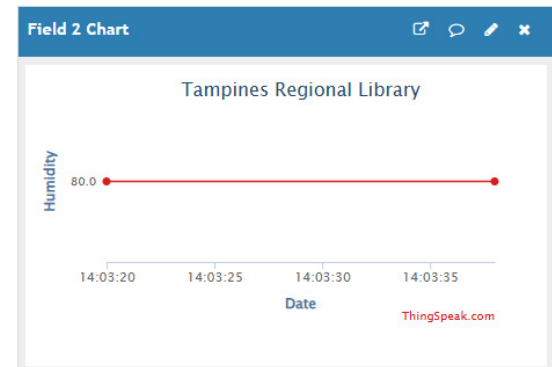
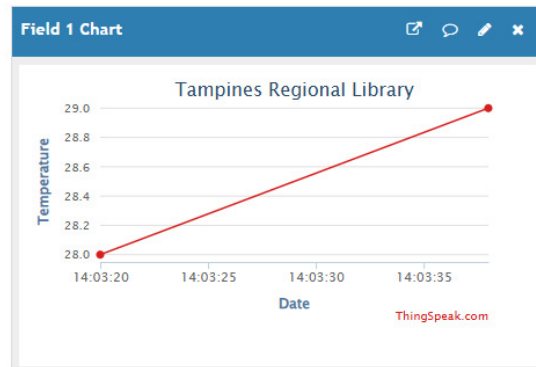
+ Add Widgets

Export recent data

MATLAB Analysis

Channel Stats

Created: 20.minutes.ago
Last entry: less.than.a.minute.ago
Entries: 2



Demo Gmail alert using Mailjet

dht11_gmail.py

email_utils.py