

# DEVELOP A PYTHON SCRIPT

Team ID	PNT2022TMID21245
Project Name	INDUSTRY-SPECIFIC INTELLIGENT FIRE MANAGEMENT SYSTEM

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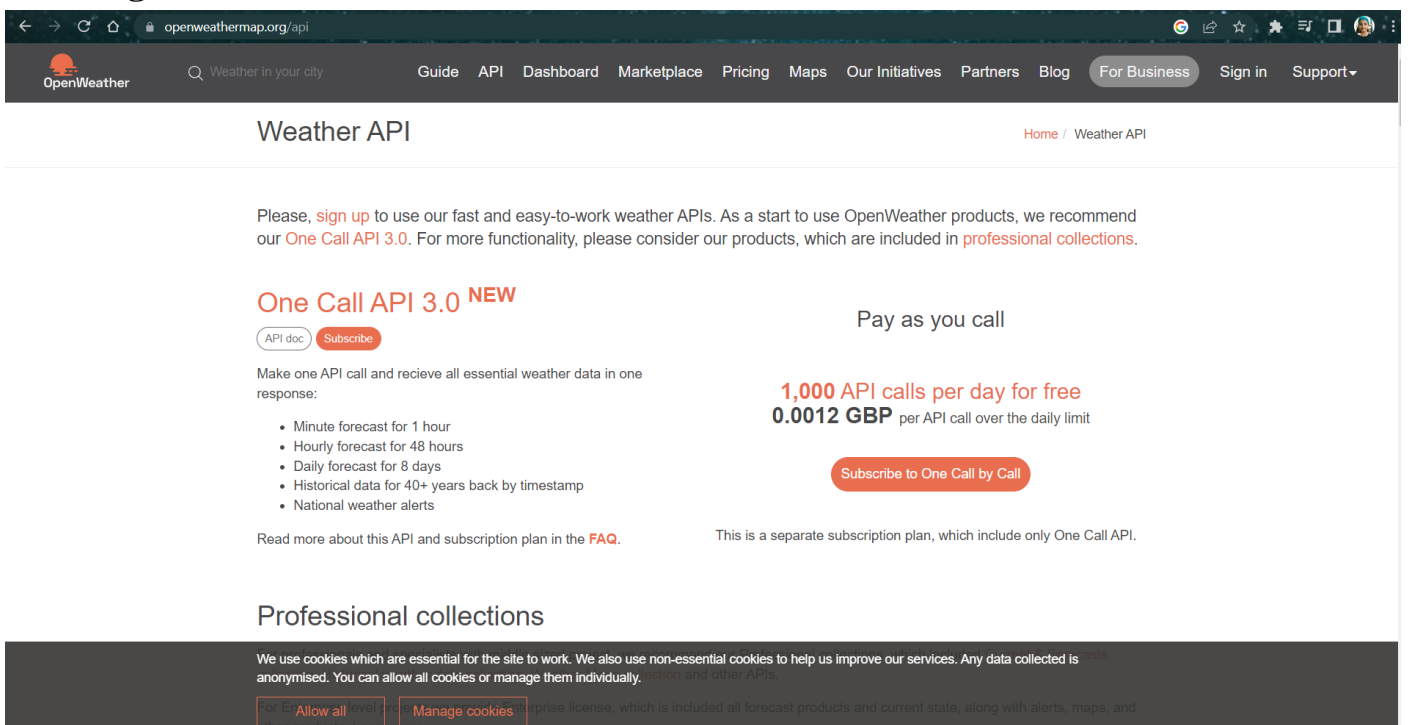
## DEVELOPING PYTHON SCRIPT TO PUBLISH AND SUBSCRIBE UNDER A TOPIC

### Step – 1:

Pip install requests

### Step – 2:

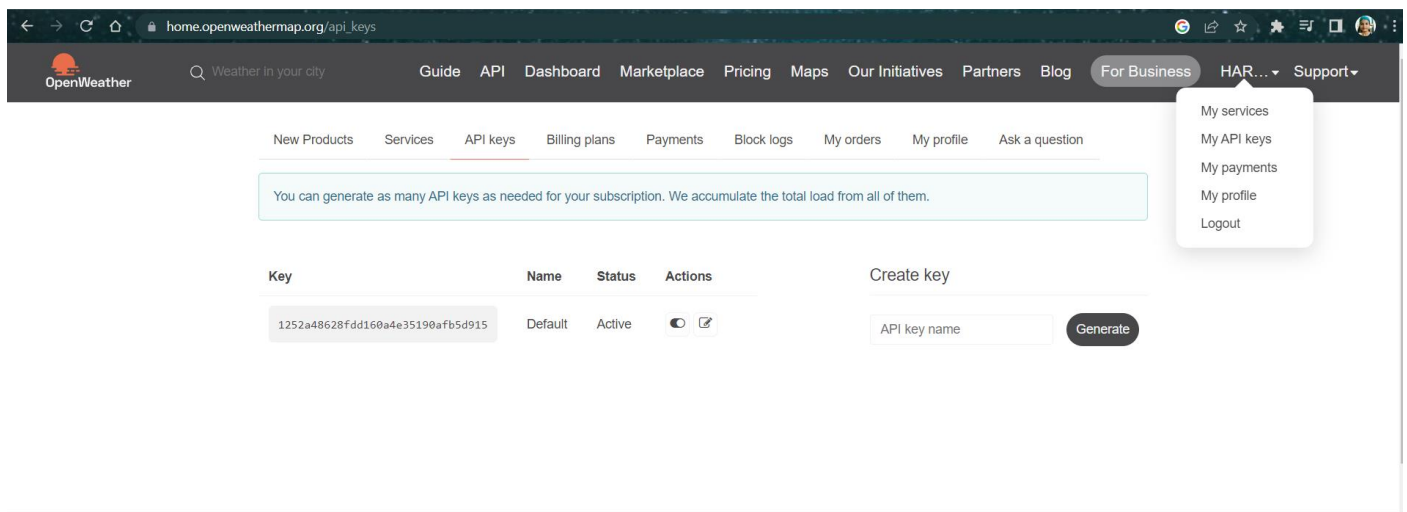
### Creating account in Weather API



The screenshot displays the OpenWeather API website. The header includes the OpenWeather logo, a search bar, and navigation links: Guide, API, Dashboard, Marketplace, Pricing, Maps, Our Initiatives, Partners, Blog, For Business, Sign in, and Support. The main heading is 'Weather API' with a breadcrumb 'Home / Weather API'. The content area promotes the 'One Call API 3.0' (marked as 'NEW') under the 'Pay as you call' model. It lists features: Minute forecast for 1 hour, Hourly forecast for 48 hours, Daily forecast for 8 days, Historical data for 40+ years back by timestamp, and National weather alerts. The pricing is '1,000 API calls per day for free' and '0.0012 GBP per API call over the daily limit'. A 'Subscribe to One Call by Call' button is present. A note states: 'This is a separate subscription plan, which include only One Call API.' Below this, the 'Professional collections' section is partially visible. At the bottom, a cookie consent banner is shown with 'Allow all' and 'Manage cookies' buttons.

### Step – 3:

## Getting the API key for our account



### Step – 4:

## PYTHON SCRIPT – TO GET WEATHER INFORMATION ABOUT CHENNAI CITY

```
import requests
```

```
a= "https://api.openweathermap.org/data/2.5/weather?q=Chennai,  
IN&appid=1252a48628fdd160a4e35190afb5d915"
```

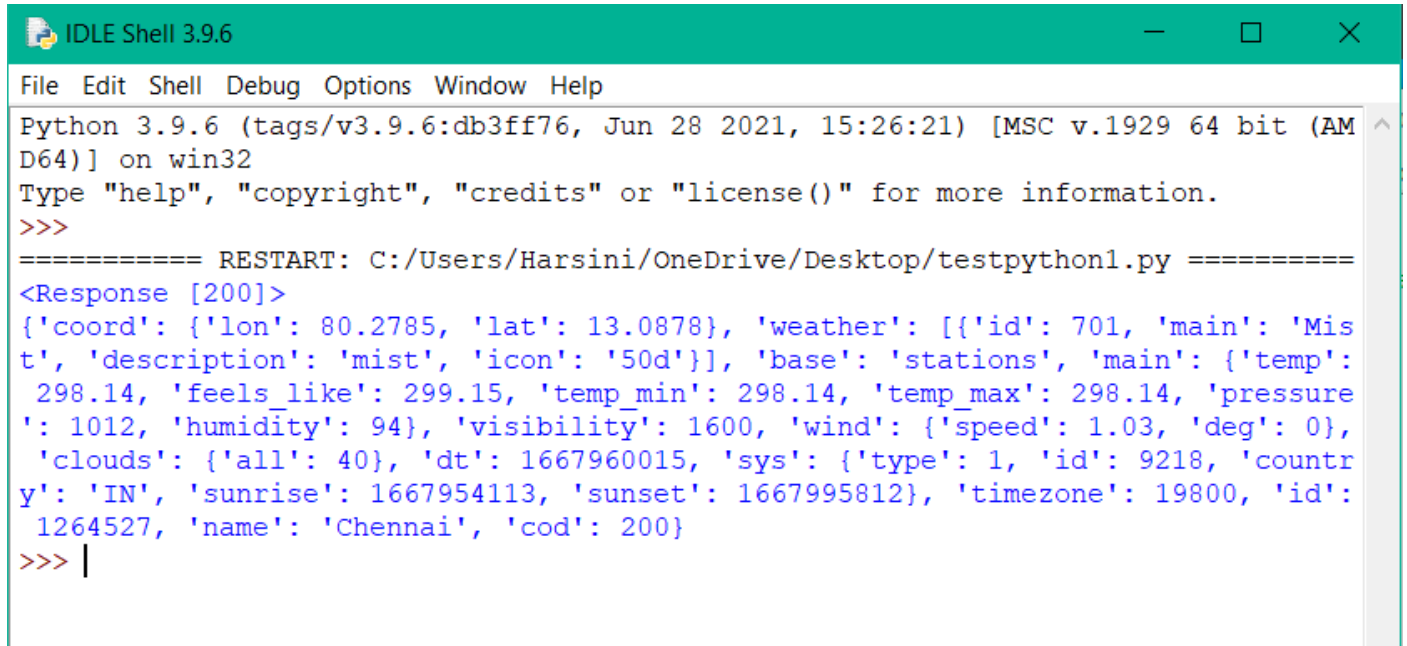
```
r = requests.get(url = a)
```

```
data = r.json()
```

```
print(r)
```

```
print(data)
```

## OUTPUT REGARDING CHENNAI CITY'S WEATHER INFORMATION:



```
IDLE Shell 3.9.6
File Edit Shell Debug Options Window Help
Python 3.9.6 (tags/v3.9.6:db3ff76, Jun 28 2021, 15:26:21) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/Harsini/OneDrive/Desktop/testpython1.py =====
<Response [200]>
{'coord': {'lon': 80.2785, 'lat': 13.0878}, 'weather': [{'id': 701, 'main': 'Mist', 'description': 'mist', 'icon': '50d'}], 'base': 'stations', 'main': {'temp': 298.14, 'feels_like': 299.15, 'temp_min': 298.14, 'temp_max': 298.14, 'pressure': 1012, 'humidity': 94}, 'visibility': 1600, 'wind': {'speed': 1.03, 'deg': 0}, 'clouds': {'all': 40}, 'dt': 1667960015, 'sys': {'type': 1, 'id': 9218, 'country': 'IN', 'sunrise': 1667954113, 'sunset': 1667995812}, 'timezone': 19800, 'id': 1264527, 'name': 'Chennai', 'cod': 200}
>>> |
```

## PYTHON SCRIPT TO SEND DATA UNDER A TOPIC:

### Step - 1

`pip install paho_mqtt`

### step- 2:

#### PYTHON SCRIPT:

```
import time
```

```
import random
```

```
def on_publish(client,usrdata,mid):
    print("published")
```

```
client = paho.Client()
```

```
client.on_publish = on_publish
```

```
client.connect('broker.mqttdashboard.com',1883)
```

```
client.loop_start()
```

```
while True:
```

```
    temp = random.randint(1,10)
```

```
    (rc,mid) = client.publish("harsini",str(temp),qos = 1)
```

```
    print(temp)
```

```
    time.sleep(10)
```

Step-3:

Connection

connected

Publish

Topic

harsini

QoS

0

Retain

Publish

Message

Subscriptions

Add New Topic Subscription

Qos: 2

harsini

Messages

2022-11-11 09:21:46

Topic: harsini

Qos: 1

5

2022-11-11 09:21:36

Topic: harsini

Qos: 1

2