Assignment-2

SUBMITTED BY

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Final year-ECE

"""

'temp_humidity.py'

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Example of sending analog sensor values to an Adafruit IO feed.

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Tutorial Link: Tutorial Link: https://learn.adafruit.com/adafruit-io-basics-temperature-and-humidity

Dependencies:

- Adafruit IO Python Client (https://github.com/adafruit/io-client-python)
- Adafruit_Python_DHT

(https://github.com/adafruit/Adafruit_Python_DHT)
"""

```
# import standard python modules.
import time

# import adafruit dht library.
import Adafruit_DHT

# import Adafruit IO REST client.
from Adafruit_IO import Client, Feed

# Delay in-between sensor readings,
in seconds.
DHT_READ_TIMEOUT = 5

# Pin connected to DHT22 data pin
DHT_DATA_PIN = 26
```

```
# Set to your Adafruit IO key.
# Remember, your key is a secret,
# so make sure not to publish it when you publish this code!
ADAFRUIT_IO_KEY = 'YOUR_AIO_KEY'

# Set to your Adafruit IO username.
# (go to https://accounts.adafruit.com to find your username).
ADAFRUIT_IO_USERNAME = 'YOUR_AIO_USERNAME'

# Create an instance of the REST client.
```

```
aio =
Client(ADAFRUIT_IO_USERNAME,
ADAFRUIT_IO_KEY)

# Set up Adafruit IO Feeds.
temperature_feed =
aio.feeds('temperature')
humidity_feed = aio.feeds('humidity')

# Set up DHT22 Sensor.
dht22_sensor = Adafruit_DHT.DHT22

while True:
    humidity, temperature =
Adafruit_DHT.read_retry(dht22_sens
or, DHT_DATA_PIN)
```

```
    if humidity is not None and
temperature is not None:
        print('Temp={0:0.1f}*C
Humidity={1:0.1f}%'.format(temperat
ure, humidity))
        # Send humidity and temperature
feeds to Adafruit IO
        temperature =
'%.2f'%(temperature)
        humidity = '%.2f'%(humidity)
        aio.send(temperature_feed.key,
str(temperature))
        aio.send(humidity_feed.key,
str(humidity))
    else:
```

```
        print('Failed to get DHT22
Reading, trying again in ',
DHT_READ_TIMEOUT, 'seconds')
    # Timeout to avoid flooding
Adafruit IO
    time.sleep(DHT_READ_TIMEOUT)
```