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\_sensor, DHT\_DATA\_PIN)

if humidity is not None and temperature is not None:

print('Temp={0:0.1f}\*C Humidity={1:0.1f}%'.format(temperature, 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)