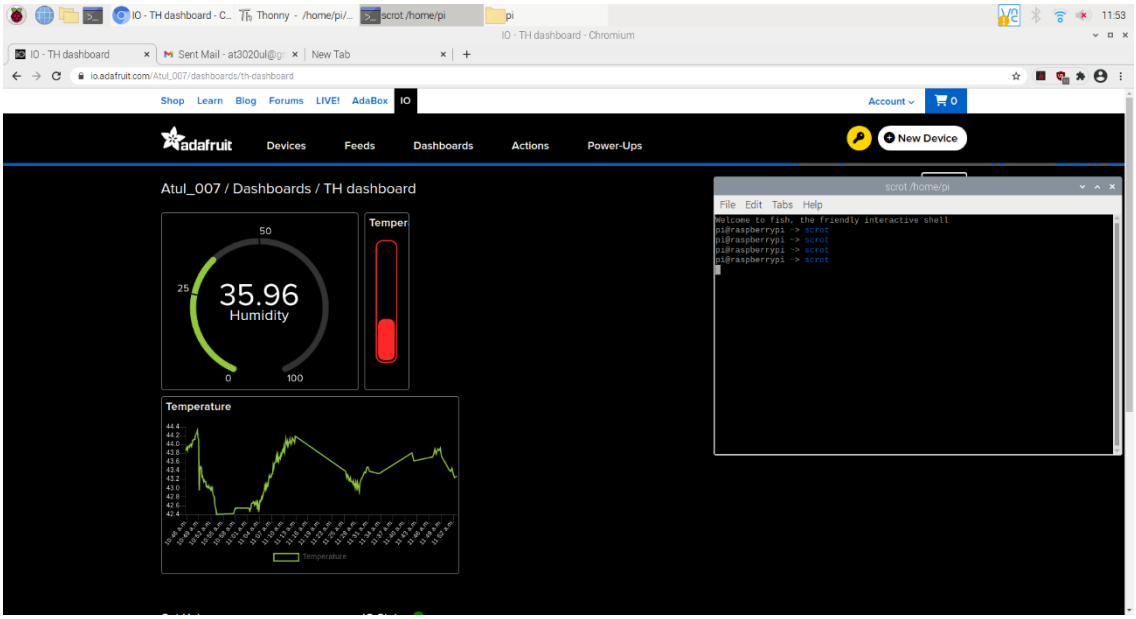
CODE

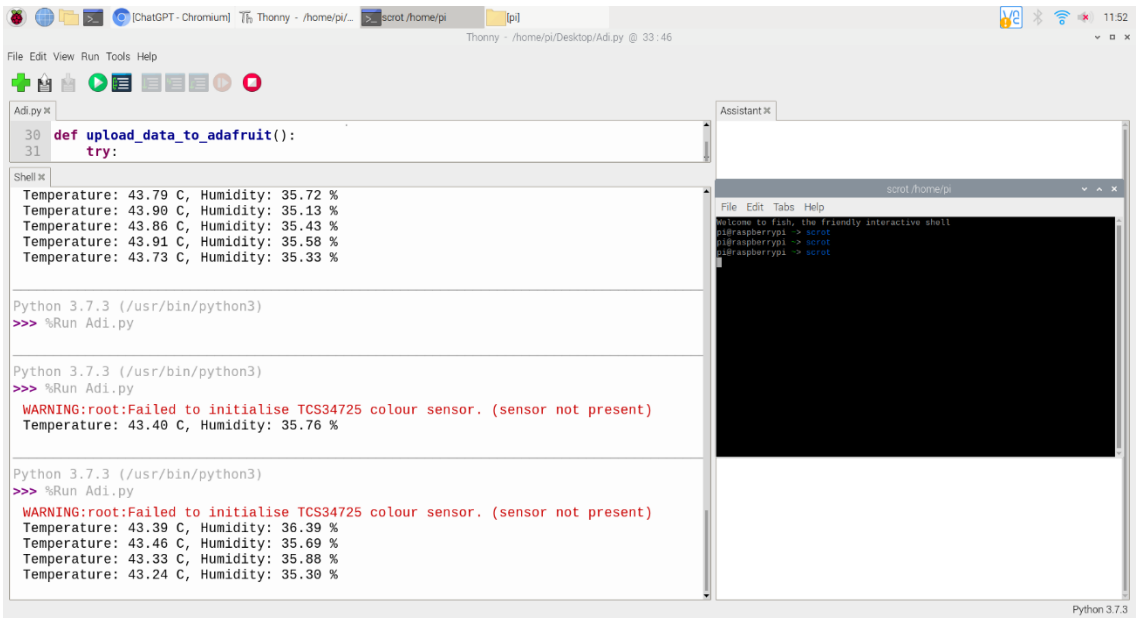
```
from sense_hat import SenseHat
from Adafruit_IO import Client, Feed, RequestError
import time

# Adafruit IO credentials
ADAFRUIT_IO_USERNAME = [redacted]
ADAFRUIT_IO_KEY = '[redacted]'
TEMPERATURE_FEED_NAME = 'temperature'
HUMIDITY_FEED_NAME = 'humidity'

# Create an instance of the REST client
aio = Client(ADAFRUIT_IO_USERNAME, ADAFRUIT_IO_KEY)

# Set up Sense HAT
sense = SenseHat()

# Function to initialize Sense HAT
def initialize_sense_hat():
    sense.clear()  # Clear any previous LED matrix display

# Function to display data on Sense HAT
def display_data_on_sense_hat(temperature, humidity):
    # Format the data for display
    message = f"Temp: {temperature:.2f} C\nHumidity: {humidity:.2f} %"

    # Display the data on Sense HAT
    sense.show_message(message, scroll_speed=0.05)

# Function to read sensor data and upload to Adafruit IO
def upload_data_to_adafruit():
    try:
        humidity = sense.get_humidity()
        temperature = sense.get_temperature()
        if humidity is not None and temperature is not None:
            print(f'Temperature: {temperature:.2f} C, Humidity: {humidity:.2f} %')
            # Send temperature data to Adafruit IO
            temperature_feed = aio.feeds(TEMPERATURE_FEED_NAME)
            aio.send_data(temperature_feed.key, temperature)

            # Send humidity data to Adafruit IO
            humidity_feed = aio.feeds(HUMIDITY_FEED_NAME)
            aio.send_data(humidity_feed.key, humidity)

            # Display data on Sense HAT
            display_data_on_sense_hat(temperature, humidity)
        else:
            print('Failed to retrieve data from sensor')
    except Exception as e:
        print(f'Error: {e}')
```

```
# Main loop to continuously read and upload data
while True:
    initialize_sense_hat()


    upload_data_to_adafruit()
    time.sleep(5)  # Adjust the sleep interval as needed
```

RESULTS



adafruit output



Output at terminal screen