| **DHT11 Pin** | **Function** | **Connects to Raspberry Pi Pin** | **Physical Pin Number** |
| --- | --- | --- | --- |

|  |  |  |  |
| --- | --- | --- | --- |
| VCC | Power | **3.3V** | **Pin 1** |

|  |  |  |  |
| --- | --- | --- | --- |
| GND | Ground | **GND** | **Pin 6** |

|  |  |  |  |
| --- | --- | --- | --- |
| DATA | Data Out | **GPIO4** | **Pin 7** |

sudo apt update

sudo apt install python3-pip

pip3 install Adafruit\_DHT

# server.py

import socket

HOST = '127.0.0.1' # localhost

PORT = 9999

server\_socket = socket.socket(socket.AF\_INET, socket.SOCK\_STREAM)

server\_socket.bind((HOST, PORT))

server\_socket.listen(1)

print(f"[SERVER] Listening on {HOST}:{PORT}...")

conn, addr = server\_socket.accept()

print(f"[SERVER] Connected by {addr}")

try:

while True:

data = conn.recv(1024).decode()

if not data:

break

print(f"[SERVER] Received: {data}")

except KeyboardInterrupt:

print("\n[SERVER] Stopping server...")

conn.close()

server\_socket.close()

# client.py

import Adafruit\_DHT

import socket

import time

sensor = Adafruit\_DHT.DHT11

gpio = 4 # GPIO pin where DHT11 is connected

HOST = '127.0.0.1'

PORT = 9999

client\_socket = socket.socket(socket.AF\_INET, socket.SOCK\_STREAM)

client\_socket.connect((HOST, PORT))

try:

while True:

humidity, temperature = Adafruit\_DHT.read(sensor, gpio)

if humidity is not None and temperature is not None:

data = f"Temperature: {temperature:.1f}C, Humidity: {humidity:.1f}%"

print(f"[CLIENT] Sending: {data}")

client\_socket.send(data.encode())

else:

print("[CLIENT] Sensor error")

time.sleep(5)

except KeyboardInterrupt:

print("\n[CLIENT] Stopping client...")

finally:

client\_socket.close()