ARDUINO CODE

const int buttonPin = 12; // Connect your button to pin 12

int buttonState = 0;

void setup() {

pinMode(buttonPin, INPUT); // Set button pin as input

Serial.begin(9600); // Initialize serial communication

}

void loop() {

buttonState = digitalRead(buttonPin); // Read button state (HIGH/LOW)

// Send button state as 1 (pressed) or 0 (not pressed)

if (buttonState == HIGH) {

Serial.println("1"); // Button pressed

} else {

Serial.println("0"); // Button not pressed

}

delay(200); // Adjust as needed to avoid spamming data

}

PYTHON CODE

import serial

import time

import requests

# Replace with your Arduino's port

arduino\_port = "COM3" # Example: "/dev/ttyUSB0" for Linux/Mac

baud\_rate = 9600 # Match the baud rate in Arduino code

# API Endpoint

api\_url = "http://192.168.110.198:8000" # Replace with your API endpoint

# Establish serial connection

ser = serial.Serial(arduino\_port, baud\_rate)

time.sleep(2) # Wait for the connection to initialize

print("Connection established. Waiting for button clicks...")

try:

while True:

if ser.in\_waiting > 0: # Check if data is available

data = ser.readline().decode('utf-8').strip() # Read and decode data

if data == "1": # Button pressed

print("Button Pressed")

# Call the API

response = requests.post(api\_url + '/led/on', json={"button\_state": "pressed"})

if response.status\_code == 200:

print("API called successfully!")

else:

print(f"API call failed with status code: {response.status\_code}")

elif data == "0": # Button released

print("Button Not Pressed")

response = requests.post(api\_url + '/led/off', json={"button\_state": "pressed"})

if response.status\_code == 200:

print("API called successfully!")

else:

print(f"API call failed with status code: {response.status\_code}")

except KeyboardInterrupt:

print("\nExiting...")

finally:

ser.close() # Close the serial connection