

Lab4_Wireless Lab

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GitHub Repo

<https://github.com/TongSUE/TECHIN-514/tree/main>

1. Number of Bluetooth devices detected: 81

2. Successful Connection with Server

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

PlatformIO: Monitor (xiao-bluetooth-client) - Task ...

Executing task in folder xiao-bluetooth-client: platformio device monitor

```
-- Terminal on /dev/cu.usbmodem1101 | 115200 8-N-1
-- Available filters and text transformations: colorize, debug, default, direct, esp32_exception_decoder, hexlify, log2file, nocontrol, printable, send_on_enter, time
-- More details at https://bit.ly/pio-monitor-filters
-- Quit: Ctrl+C | Menu: Ctrl+T | Help: Ctrl+F followed by Ctrl+H
>>> FOUND SERVER <<
Address: 98:3d:ae:ab:06:92
Forming a connection to 98:3d:ae:ab:06:92
- Created client
- Connected to server
- Found our service
- Found our characteristic
The characteristic value was: Sever Name: FGONB
We are now connected to the BLE Server.
```

3. Server Device: Raw and Denoised sensor data

```
main.cpp M
xiao-bluetooth-server > src > C++ main.cpp > setup()
47 void setup() {
54     for (int i = 0; i < numReadings; i++) {
56         }
57     }
58     BLEDevice::init("FGONB");
59 }
```

正在文件夹 xiao-bluetooth-server 中执行任务: C:\Users\DELL\platformio\penv\Scripts\platformio.exe run --target upload --target monitor --environment seed_xiao_e*
sp32C3

Raw Data	Denoised Data
Raw:221cm	Denoised:90cm
Raw:221cm	Denoised:133cm
Raw:4cm	Denoised:134cm
Raw:8cm	Denoised:135cm
Raw:12cm	Denoised:93cm
Raw:6cm	Denoised:56cm
Data Sent: 7	Denoised:7cm
Raw:7cm	Denoised:8cm
Data Sent: 8	Denoised:8cm
Raw:7cm	Denoised:7cm
Data Sent: 7	Denoised:7cm
Raw:7cm	Denoised:6cm
Data Sent: 6	Denoised:8cm
Raw:13cm	Denoised:9cm
Data Sent: 8	Denoised:13cm
Raw:13cm	Denoised:10cm
Data Sent: 10	Denoised:12cm
Raw:14cm	Denoised:13cm
Data Sent: 12	Denoised:14cm
Raw:16cm	Denoised:14cm
Data Sent: 13	Denoised:15cm
Raw:15cm	Denoised:14cm
Data Sent: 14	Denoised:15cm
Raw:16cm	Denoised:15cm
Data Sent: 15	Denoised:15cm
Raw:16cm	Denoised:15cm
Data Sent: 15	Denoised:15cm

4. Client device: Current, Maximum, and Minimum Data

```
--- Quit: Ctrl+C | Menu: Ctrl+T | Help: Ctrl+T followed by Ctrl+H
- Found our service
- Found our characteristic
The characteristic value was: 3
We are now connected to the BLE Server.
===== New distance data received =====
Current distance: 3.00
Min distance since connection: 3.00
Max distance since connection: 3.00
=====
===== New distance data received =====
Current distance: 3.00
Min distance since connection: 3.00
Max distance since connection: 3.00
=====
===== New distance data received =====
Current distance: 2.00
Min distance since connection: 2.00
Max distance since connection: 3.00
=====
===== New distance data received =====
Current distance: 8.00
Min distance since connection: 2.00
Max distance since connection: 8.00
=====
===== New distance data received =====
Current distance: 8.00
Min distance since connection: 2.00
Max distance since connection: 8.00
=====
===== New distance data received =====
Current distance: 9.00
Min distance since connection: 2.00
Max distance since connection: 9.00
=====
===== New distance data received =====
Current distance: 10.00
Min distance since connection: 2.00
Max distance since connection: 10.00
=====
===== New distance data received =====
Current distance: 10.00
Min distance since connection: 2.00
Max distance since connection: 10.00
=====
===== New distance data received =====
Current distance: 10.00
Min distance since connection: 2.00
Max distance since connection: 10.00
=====
===== New distance data received =====
Current distance: 10.00
Min distance since connection: 2.00
Max distance since connection: 10.00
=====
===== New distance data received =====
Current distance: 11.00
Min distance since connection: 2.00
Max distance since connection: 11.00
=====
===== New distance data received =====
Current distance: 12.00
Min distance since connection: 2.00
Max distance since connection: 12.00
=====
===== New distance data received =====
Current distance: 14.00
Min distance since connection: 2.00
Max distance since connection: 17.00
=====
===== New distance data received =====
Current distance: 16.00
Min distance since connection: 2.00
Max distance since connection: 17.00
=====
===== New distance data received =====
Current distance: 19.00
Min distance since connection: 2.00
Max distance since connection: 19.00
=====
===== New distance data received =====
Current distance: 20.00
Min distance since connection: 2.00
Max distance since connection: 20.00
=====
===== New distance data received =====
Current distance: 23.00
Min distance since connection: 2.00
Max distance since connection: 23.00
=====
===== New distance data received =====
Current distance: 26.00
Min distance since connection: 2.00
Max distance since connection: 26.00
=====
===== New distance data received =====
Current distance: 28.00
Min distance since connection: 2.00
Max distance since connection: 28.00
=====
```