**Important Links**

<https://circuitdigest.com/microcontroller-projects/using-classic-bluetooth-in-esp32-and-toogle-an-led>

**Github**

<https://github.com/espressif/arduino-esp32>

<https://github.com/espressif/arduino-esp32/blob/master/docs/arduino-ide/boards_manager.md>

<https://github.com/esp8266/Arduino>

**ESP32 IDF**

<https://github.com/JoaoLopesF/Esp-Mobile-Apps-Esp32>

**Board Manager URL**

<https://dl.espressif.com/dl/package_esp32_index.json>

<https://dl.espressif.com/dl/package_esp32_dev_index.json>

**Backup**

https://arduino.esp8266.com/stable/package\_esp8266com\_index.json

**Update Tools in Arduino**

Go into tools, Board Manager, ESP32

**Install:** esp32 by Expressif Systems

**Backup**

Do the same with the esp8266 just in case

**Install:** esp8266 by ESP8266 Community

**Git GUI**

Must follow installation for git gui

<https://github.com/espressif/arduino-esp32/blob/master/docs/arduino-ide/windows.md>

**Using the Development Board**

Go to Arduino IDE > Tools > Board > ***change to the appropriate board***

**YouTube Video Examples**

<https://www.youtube.com/watch?v=NZi7ykalZhc&t=171s>

<https://www.youtube.com/watch?v=5CkGpAai_aI>

<https://www.youtube.com/watch?v=fxvoNpiqipQ>

<https://www.youtube.com/watch?v=AuiWwJZQEec>

<https://www.youtube.com/watch?v=g0pSfyXOXj8>

**Important Guides for BLE**

<https://www.instructables.com/id/ESP32-BLE-Android-App-Arduino-IDE-AWESOME/>

**Sending Multiple Values**

A lot of people have asked this question: "how do I send multiple values to and from the ESP32 and app?" That's a good question, and luckily it's not hard at all! The easiest way I've found is to simply send the values in comma-separated variable (CSV) format. For example, if you're measuring temperature and humidity and you measured 21 \*C and 55% humidity and want to send it to the app, simply program the ESP32 to send "21,55" and the app can parse it easily.

<https://github.com/kakopappa/bluetooth_android_esp32_example>