

Installing ESP32 Add-on in Arduino IDE

Prerequisites

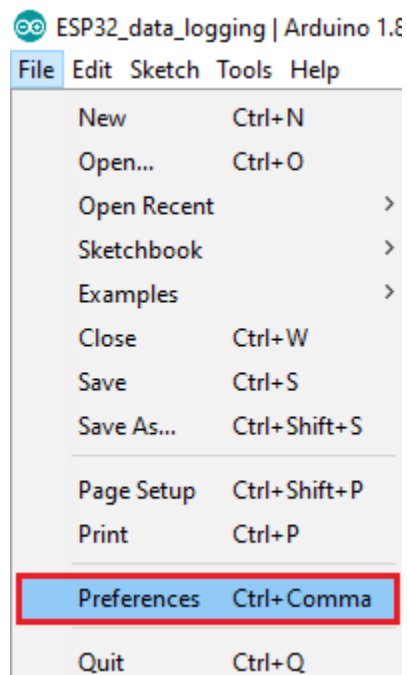
Before starting this installation procedure, make sure you have the latest version of the Arduino IDE installed in your computer. If you don't, uninstall it and install it again. Otherwise, it may not work.

Having the latest Arduino IDE software installed from arduino.cc/en/Main/Software, continue with this tutorial.

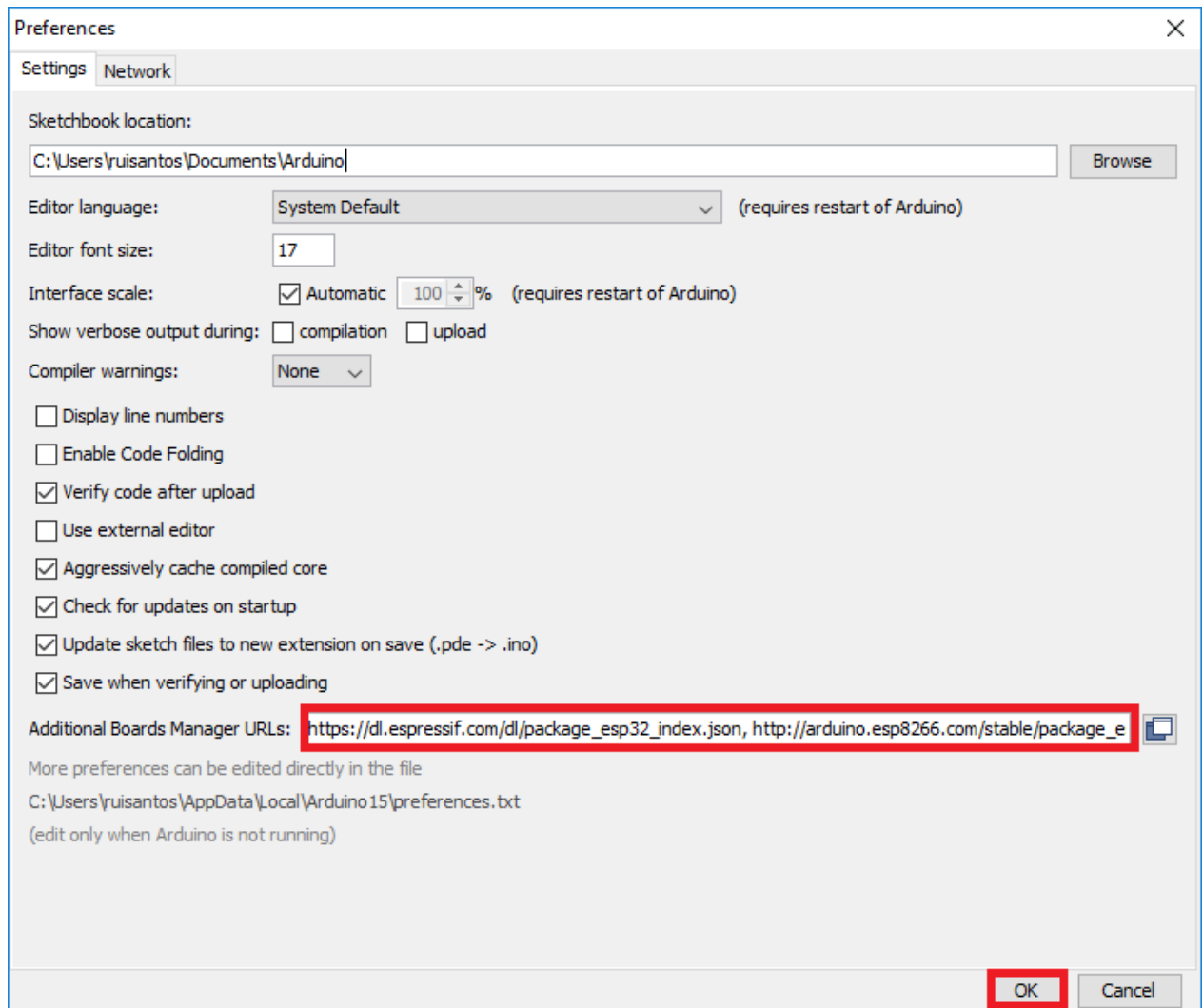
Installation steps

To install the ESP32 board in your Arduino IDE, follow these next instructions:

1. In your Arduino IDE, go to **File> Preferences**



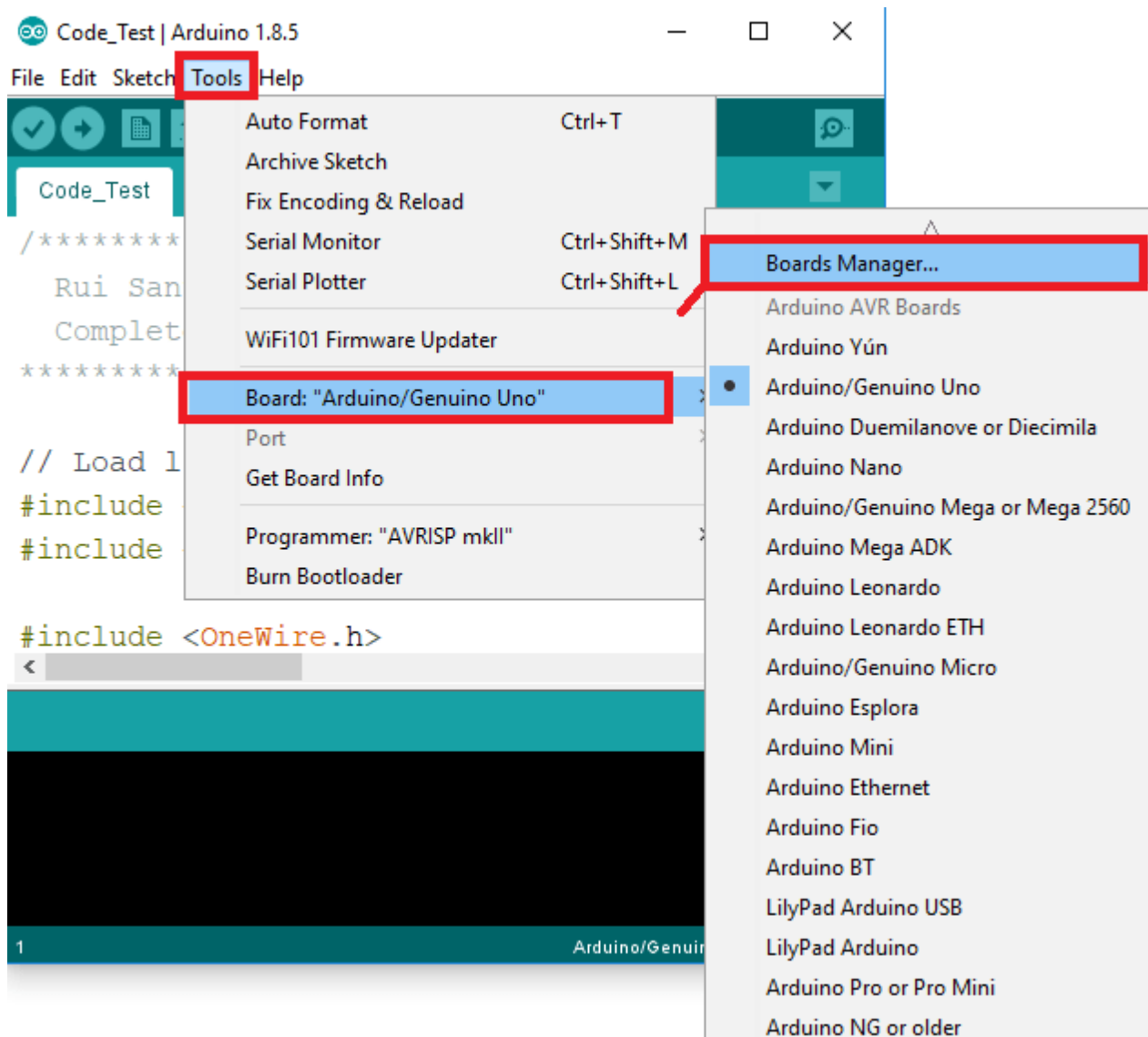
2. Enter **`https://dl.espressif.com/dl/package_esp32_index.json`** into the “Additional Board Manager URLs” field as shown in the figure below. Then, click the “OK” button:



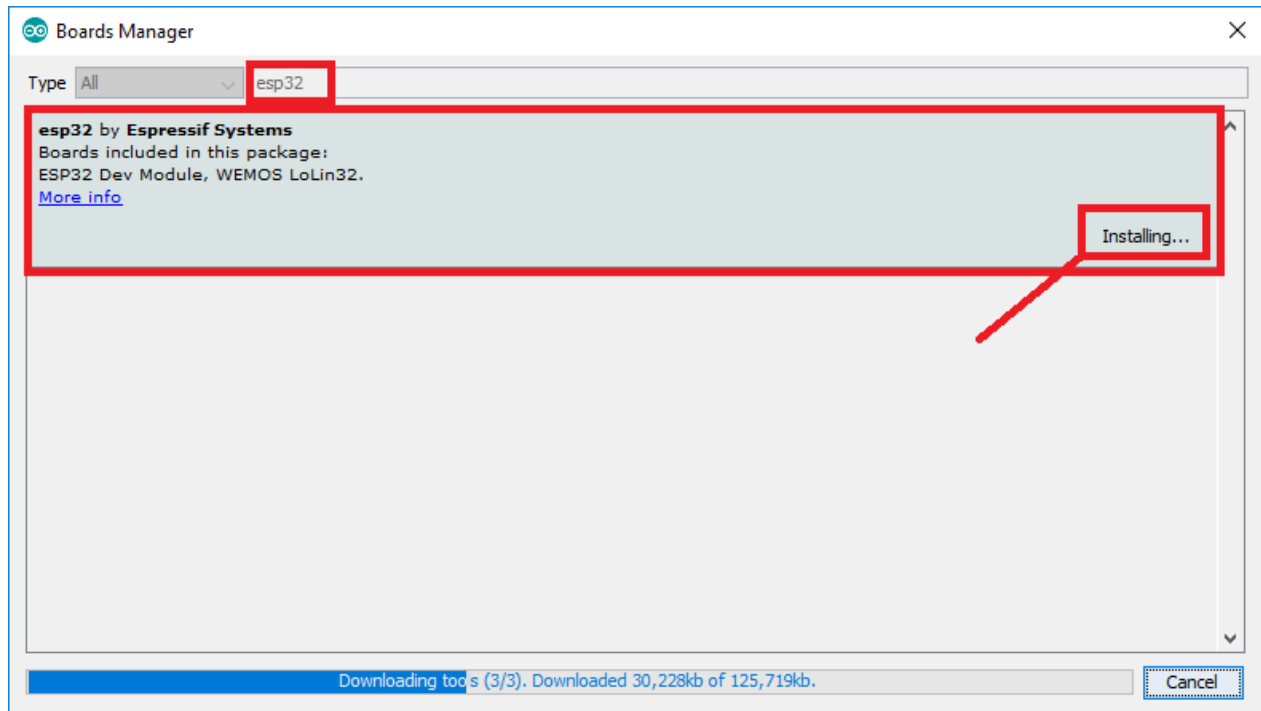
Note: if you already have the ESP8266 boards URL, you can separate the URLs with a comma as follows:

```
https://dl.espressif.com/dl/package_esp32_index.json,  
http://arduino.esp8266.com/stable/package_esp8266com_index.json
```

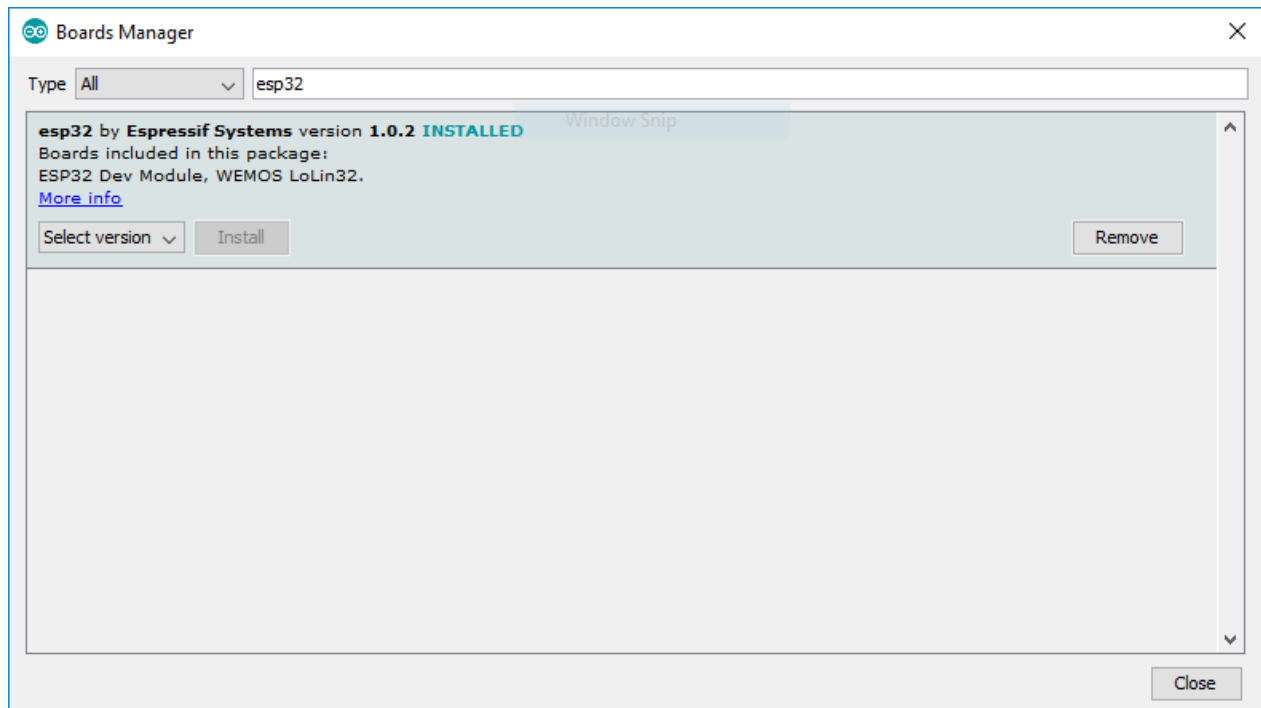
3. Open the Boards Manager. Go to **Tools > Board > Boards Manager...**



4. Search for **ESP32** and press install button for the “**ESP32 by Espressif Systems**”:



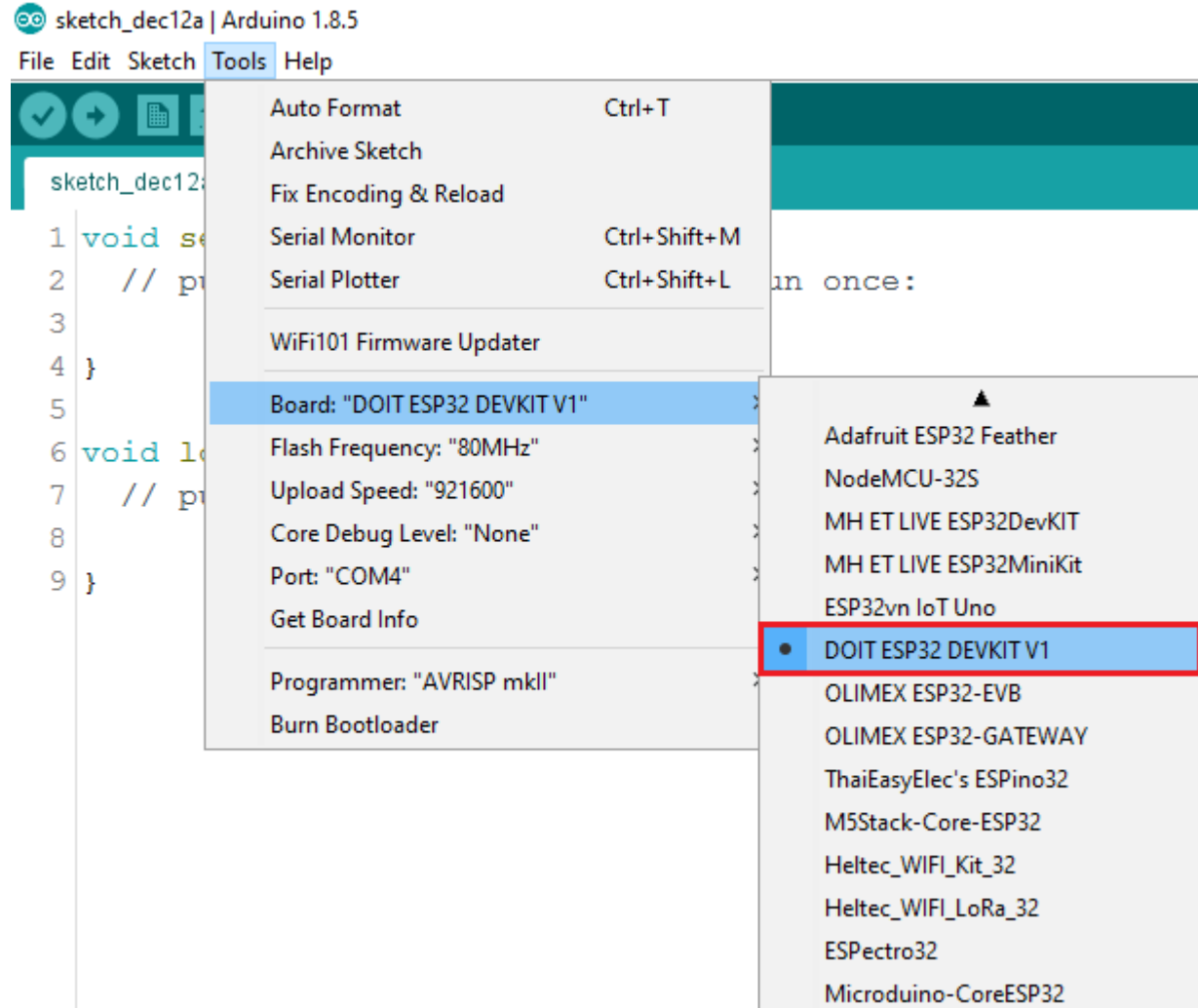
5. That's it. It should be installed after a few seconds.



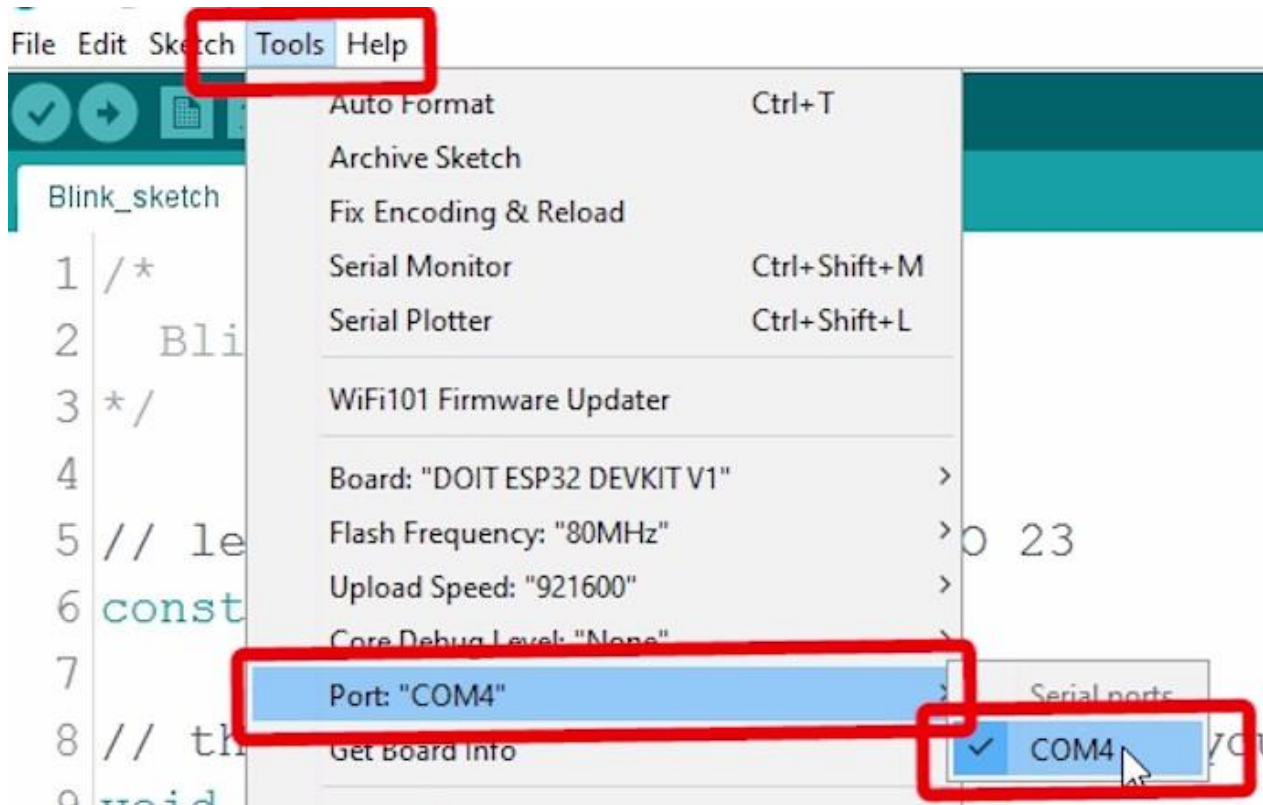
Testing the Installation

Plug the ESP32 board to your computer. With your Arduino IDE open, follow these steps:

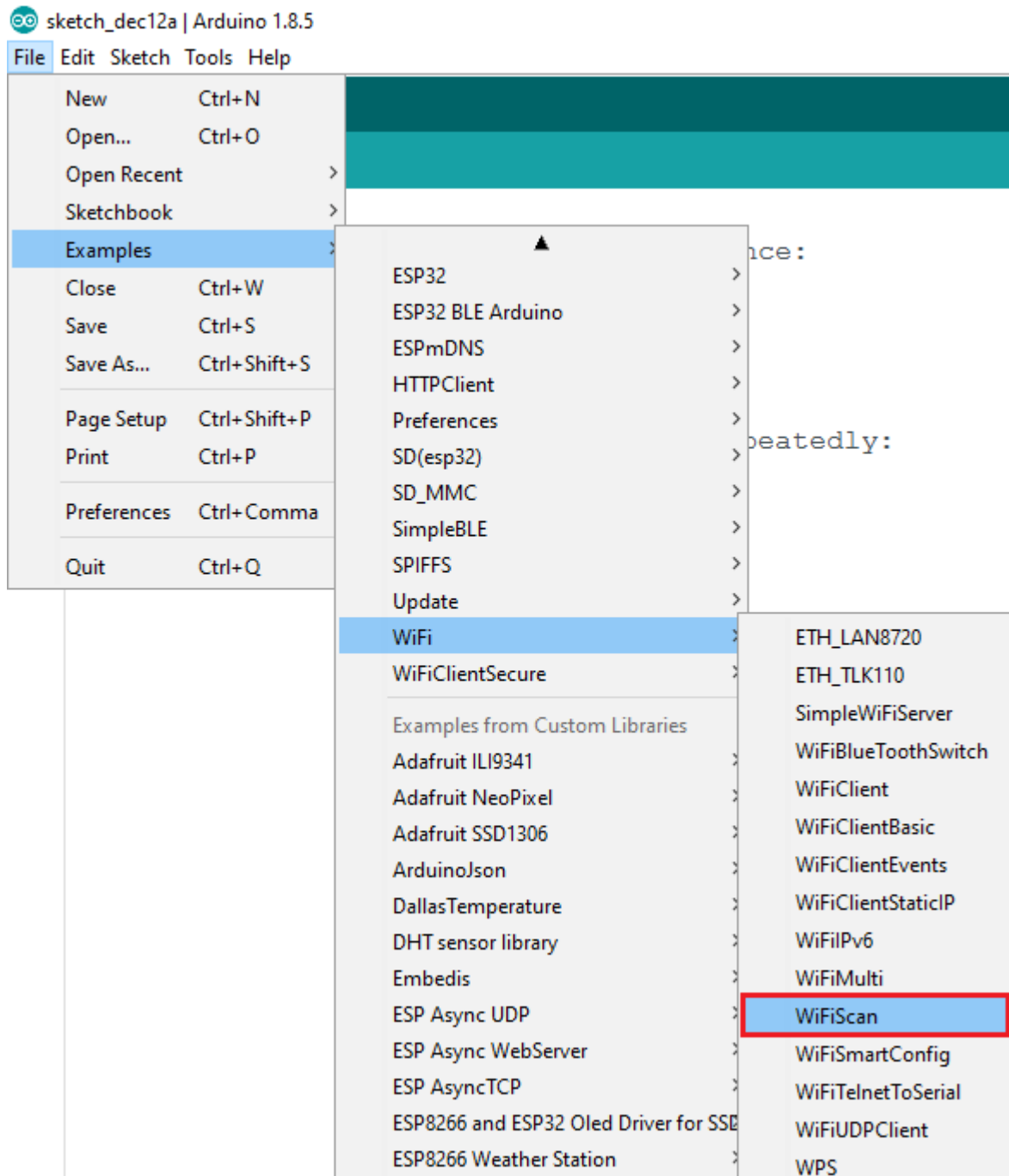
1. Select your Board in **Tools** > **Board** menu (in my case it's the **ESP32 Dev Kit**)



2. Select the Port (if you don't see the COM Port in your Arduino IDE, you need to install the [CP210x USB to UART Bridge VCP Drivers](#)):



3. Open the following example under **File > Examples > WiFi (ESP32) > WiFiScan**



4. A new sketch opens in your Arduino IDE:

The image shows the Arduino IDE interface with a sketch named 'WiFiScan'. The code is written in C++ and includes a comment block explaining the sketch's purpose. It includes the 'WiFi.h' library and defines a 'setup()' function that initializes the serial port, sets the WiFi mode to station, disconnects from any previous AP, and prints a message. The 'loop()' function is also defined but is currently empty. The IDE's status bar at the bottom indicates the board is 'DOIT ESP32 DEVKIT V1' and the port is 'None on COM4'.

```
1 /*
2  * This sketch demonstrates how to scan WiFi networks.
3  * The API is almost the same as with the WiFi Shield library,
4  * the most obvious difference being the different file you need to include:
5  */
6 #include "WiFi.h"
7
8 void setup()
9 {
10     Serial.begin(115200);
11
12     // Set WiFi to station mode and disconnect from an AP if it was previously
13     WiFi.mode(WIFI_STA);
14     WiFi.disconnect();
15     delay(100);
16
17     Serial.println("Setup done");
18 }
19
20 void loop()
```

5. Press the **Upload** button in the Arduino IDE. Wait a few seconds while the code compiles and uploads to your board.



6. If everything went as expected, you should see a **"Done uploading."** message.


```
Done uploading.
Writing at 0x00042000... (84 %)
Writing at 0x00050000... (89 %)
Writing at 0x00054000... (94 %)
Writing at 0x00058000... (100 %)
Wrote 481440 bytes (299651 compressed) at 0x00010000 in 4.7 seconds
Hash of data verified.
Compressed 3072 bytes to 122...

Writing at 0x00008000... (100 %)
Wrote 3072 bytes (122 compressed) at 0x00008000 in 0.0 seconds (effective 115200 bps)
Hash of data verified.

Leaving...
Hard resetting...
```

DOIT ESP32 DEVKIT V1, 80MHz, 921600, None on COM4

7. Open the Arduino IDE Serial Monitor at a baud rate of 115200:



8. Press the ESP32 on-board **Enable** button and you should see the networks available near your ESP32:

