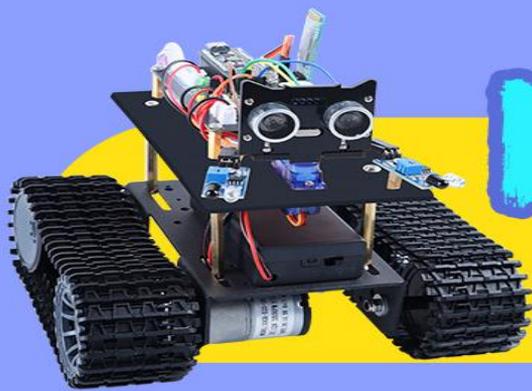


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ASSEMBLY TUTORIAL

Arduino IDE

As an open source software, Arduino IDE, basing on Processing IDE development is an integrated development environment officially launched by Arduino. In the next part, each movement of the vehicle is controlled by the program so it's necessary to get the program installed and set up correctly. By using Arduino IDE, you just write the program code in the IDE and upload it to the Arduino circuit board. The program will tell the Arduino circuit board what to do.



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So, where can we download Arduino IDE?

STEP 1: Go to <https://www.arduino.cc/en/Main/Software> and you will see below page. The version available at this website is usually the latest version, and the actual version may be newer than the version in the picture

Downloads

 **Arduino IDE 1.8.13**

The open-source Arduino Software (IDE) makes it easy to write code and upload it to the board. This software can be used with any Arduino board.

Refer to the [Getting Started](#) page for Installation instructions.

SOURCE CODE

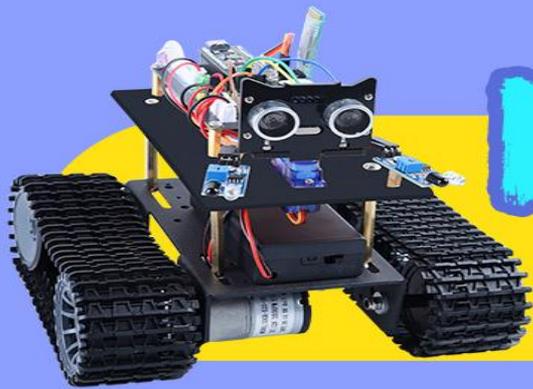
Active development of the Arduino software is [hosted by GitHub](#). See the instructions for [building the code](#). Latest release source code archives are available [here](#). The archives are PGP-signed so they can be verified using [this](#) gpg key.

DOWNLOAD OPTIONS

- Windows** Win 7 and newer
- Windows** ZIP file
- Windows app** Win 8.1 or 10 
- Linux** 32 bits
- Linux** 64 bits
- Linux** ARM 32 bits
- Linux** ARM 64 bits
- Mac OS X** 10.10 or newer

[Release Notes](#)
[Checksums \(sha512\)](#)





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STEP 2: Download the development software that is suitable for the operating system of your computer.

Take Windows as an example here. If you are MacOS, please close the file and open the “For Mac Lesson 0 Setting up development environment”.

You can install it using the EXE installation package or the green package. The following is the exe implementation of the installation procedures

 **Arduino IDE 1.8.13**

The open-source Arduino Software (IDE) makes it easy to write code and upload it to the board. This software can be used with any Arduino board.

Refer to the [Getting Started](#) page for installation instructions.

SOURCE CODE

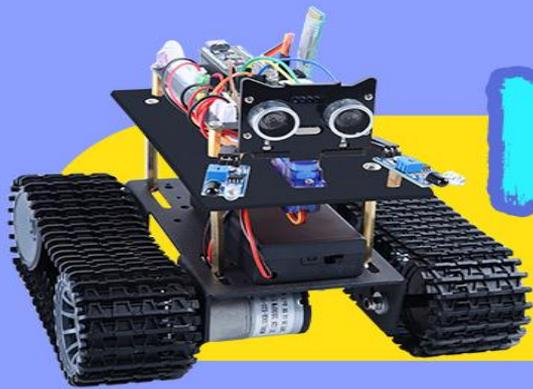
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DOWNLOAD OPTIONS

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- [Linux](#) 32 bits
- [Linux](#) 64 bits
- [Linux](#) ARM 32 bits
- [Linux](#) ARM 64 bits
- [Mac OS X](#) 10.10 or newer

[Release Notes](#)
[Checksums \(sha512\)](#)





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STEP 3: Press the button
“JUST DOWNLOAD” to
download the software.

The download file:

 `arduino-1.8.13-windows`

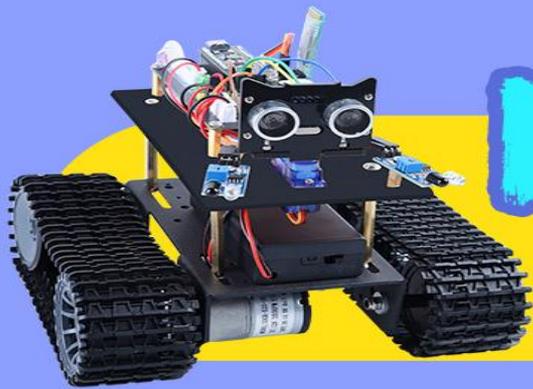
Contribute to the Arduino Software

Consider supporting the Arduino Software by contributing to its development. (US tax payers, please note this contribution is not tax deductible). Learn more on how your contribution will be used.

SINCE MARCH 2015, THE ARDUINO IDE HAS BEEN DOWNLOADED **33,980,847** TIMES. (IMPRESSIVE!) NO LONGER JUST FOR ARDUINO AND GENUINO BOARDS, HUNDREDS OF COMPANIES AROUND THE WORLD ARE USING THE IDE TO PROGRAM THEIR DEVICES, INCLUDING COMPATIBLES, CLONES, AND EVEN COUNTERFEITS. HELP ACCELERATE ITS DEVELOPMENT WITH A SMALL CONTRIBUTION! REMEMBER: OPEN SOURCE IS LOVE!

\$3 \$5 \$10 \$25 \$50 OTHER

[JUST DOWNLOAD](#) [CONTRIBUTE & DOWNLOAD](#)



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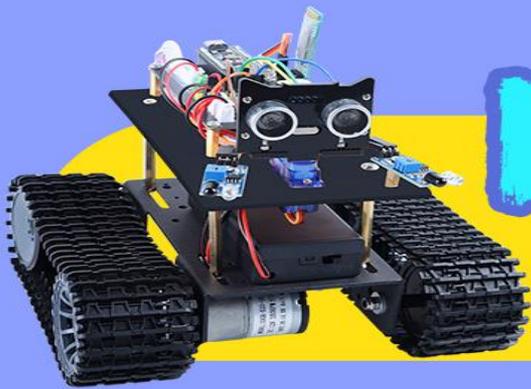
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STEP 4:

These are available in the materials we provide, and the versions of our materials are the latest versions when this course was made.



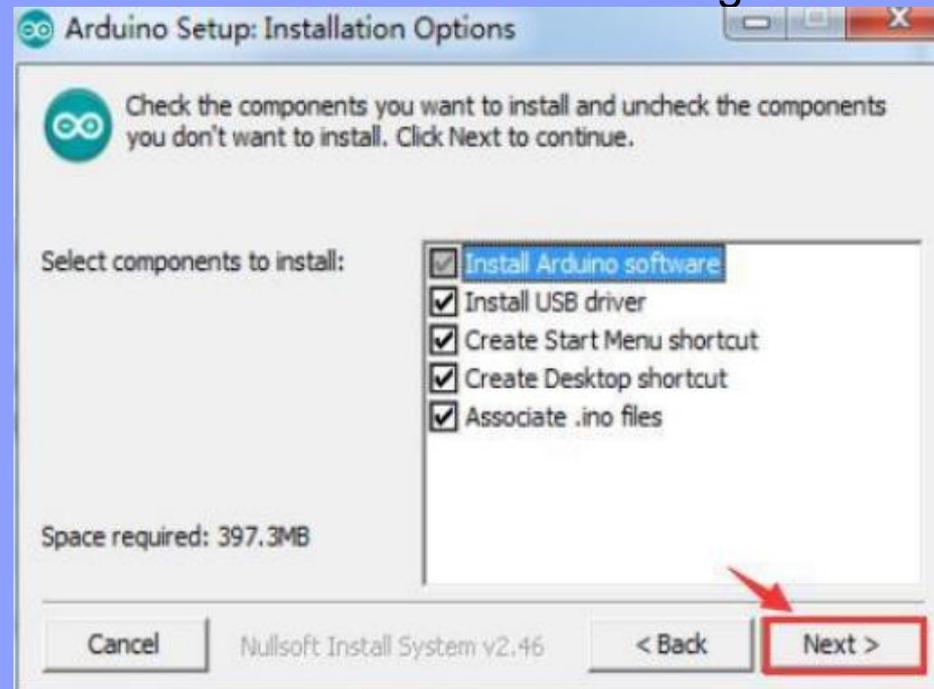
Choose "I Agree" to see the following interface.

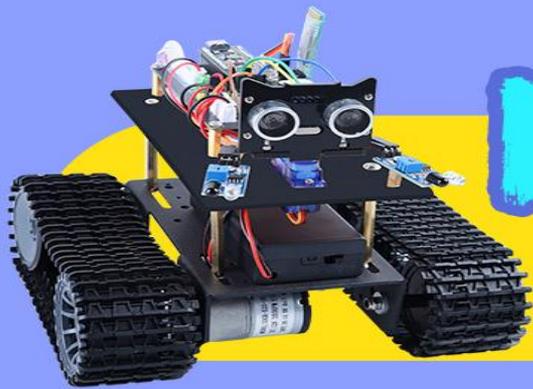


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Choose "Next" to see the following interface.

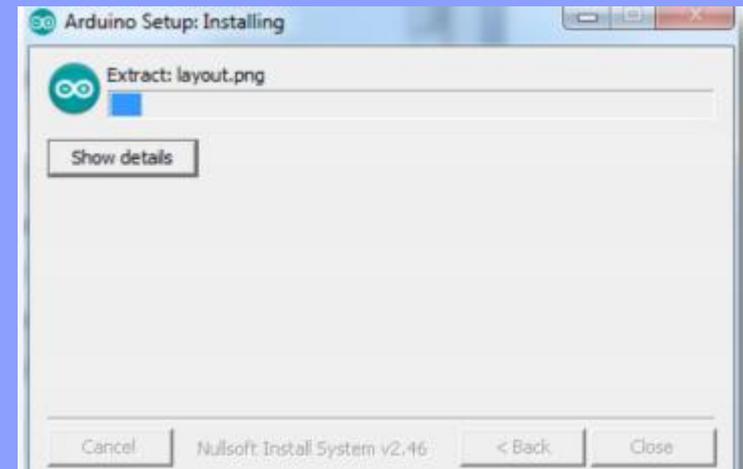


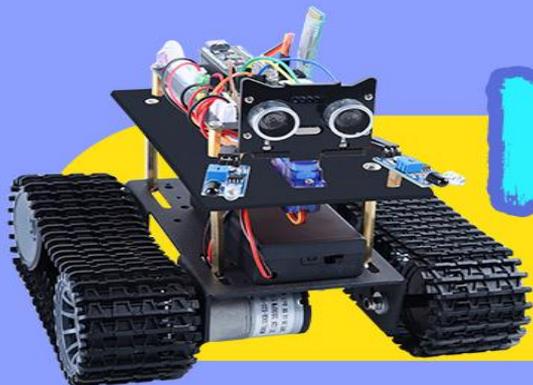


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Finally, the following interface appears, you should choose “Install” to ensure the correctness of development.





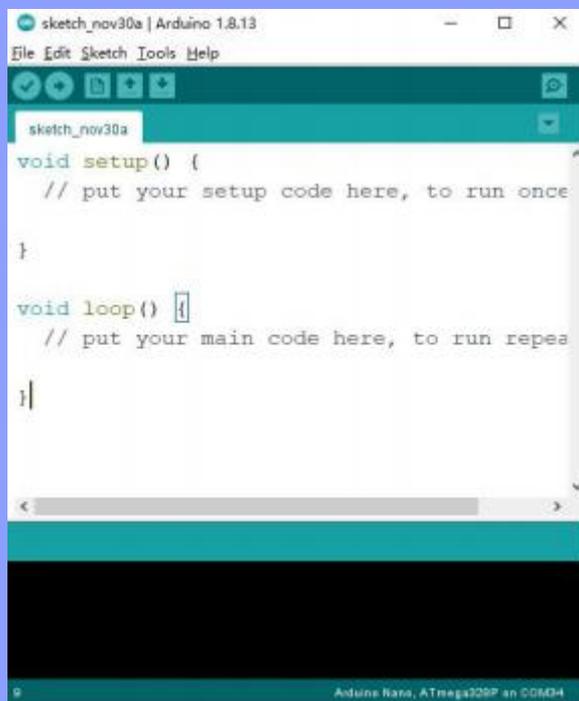
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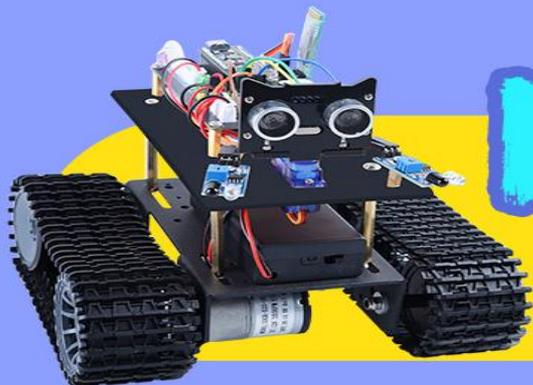
ASSEMBLY TUTORIAL

STEP 5: Next, the following icon appears on the desktop.



Double-click to enter the desired development environment.

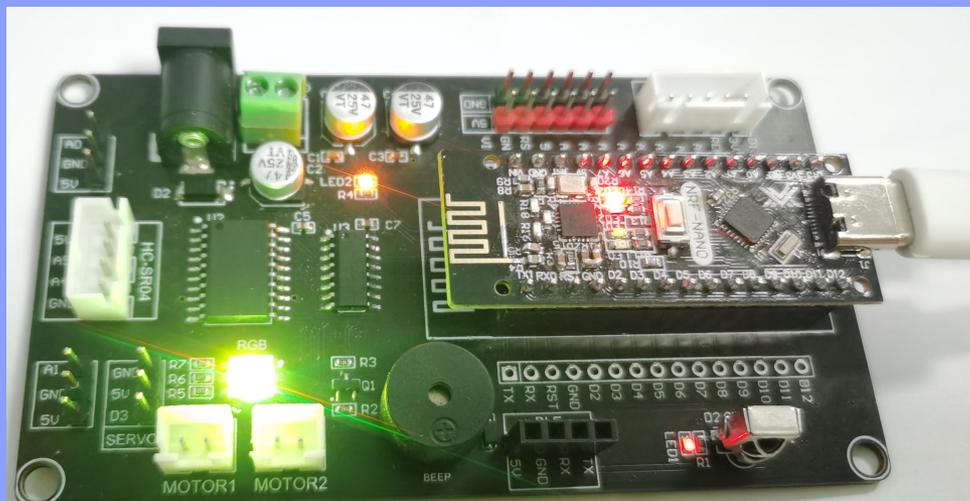


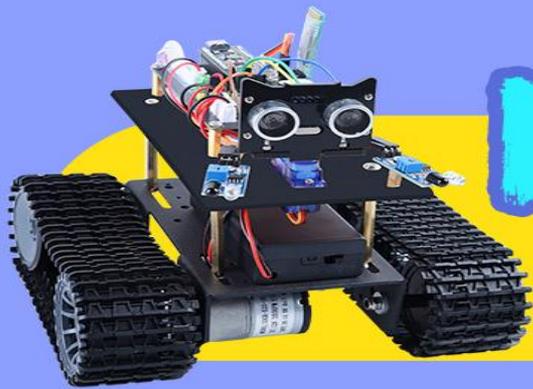


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STEP 6: Connect development board of the car to the computer.





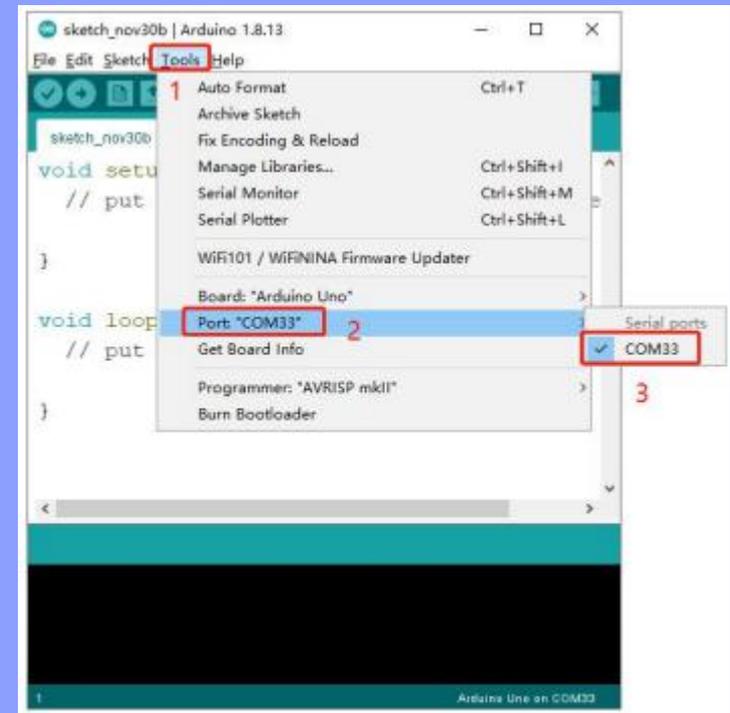
NANOBOT

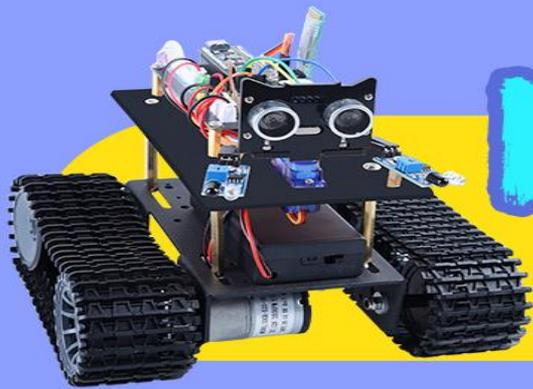
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STEP 7: Open the Arduino IDE. Select “Tool” → “Board: ” → “Arduino/Genuino Uno”.

Select “Tool” → “Port:” → COM (XX)” .

Each Arduino Uno board has a different COM number on the same computer and usually the COM number with a suffix name “(Arduino/Genuino Uno)” in Arduino 1.8.9. You should choose the COM number of the actual display.

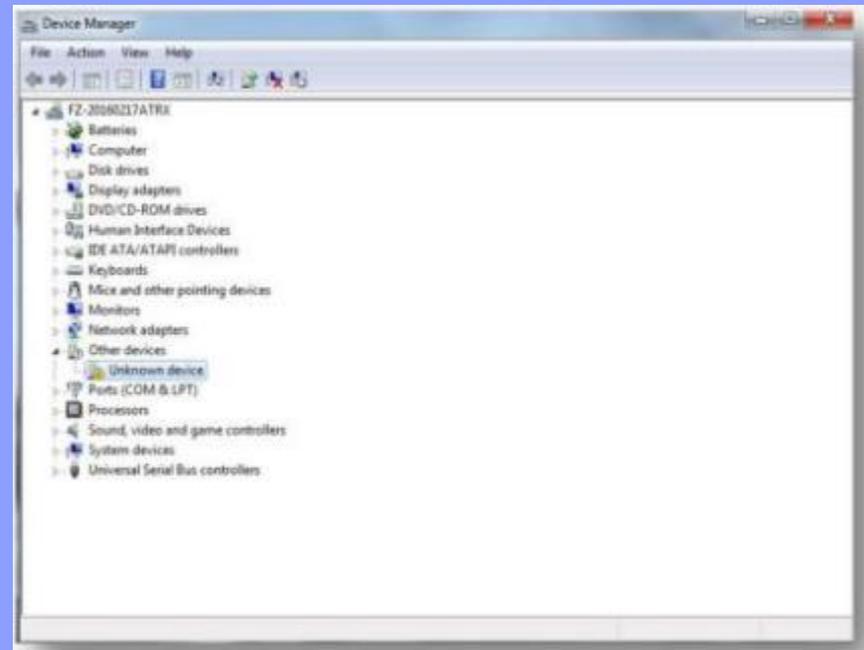


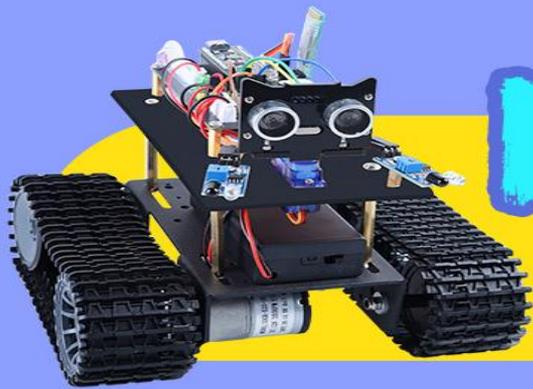


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If you see the port “COM (XX)” , it means that the vehicle has been connected correctly to the computer. In this case, you can jump to STEP 8 directly Otherwise, you will need to manually install the driver in the following way.





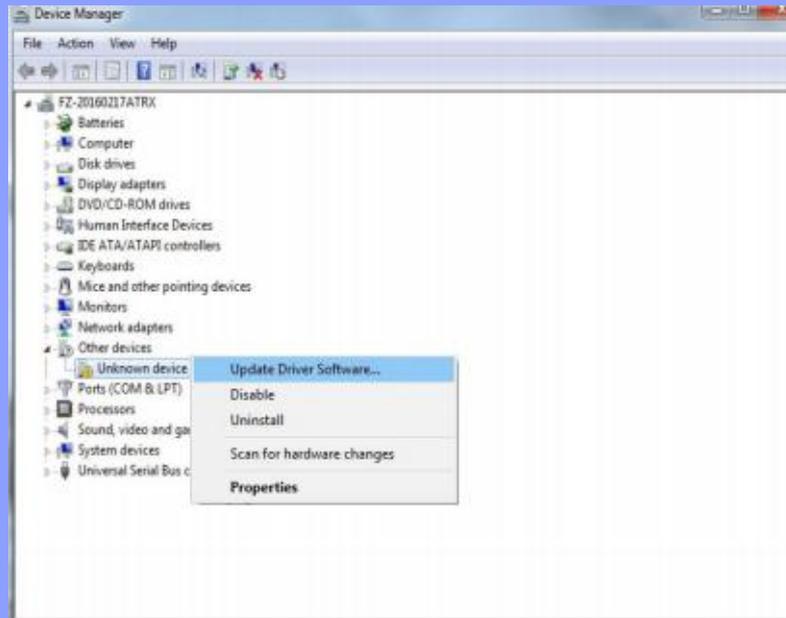
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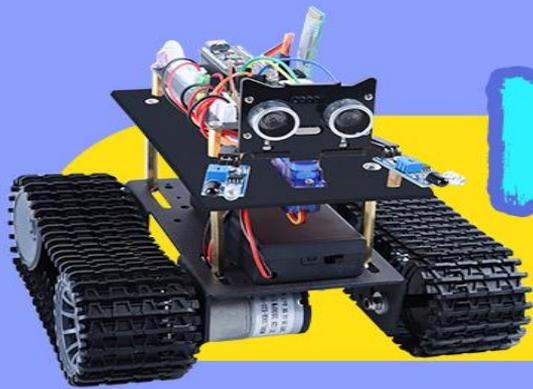
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Open Device Manager by right click

My Computer——Management——Device Manager.

Right click unknown——device Update Device Software.

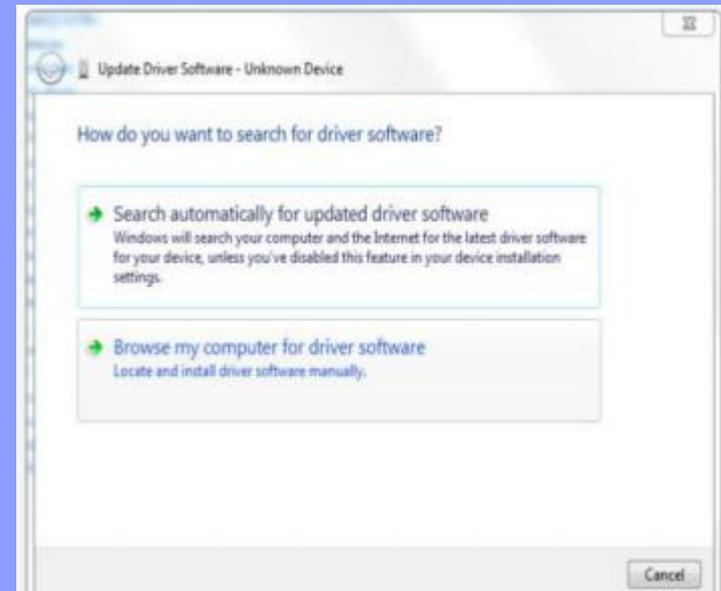


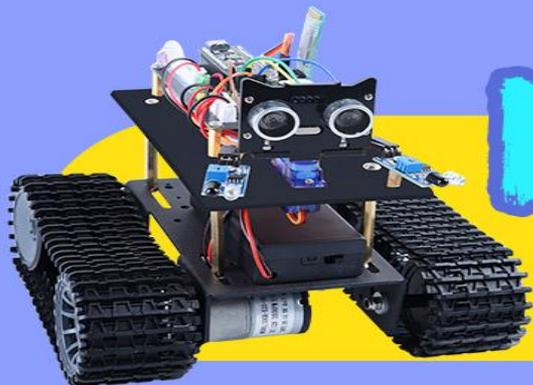


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It shows that the driver has not been installed, and you need to click “Browse my computer for driver software” to find the drivers. The drives is in the Arduin folder. Normally you will install the folde in `C:\Program Files (x86)\Arduino`.

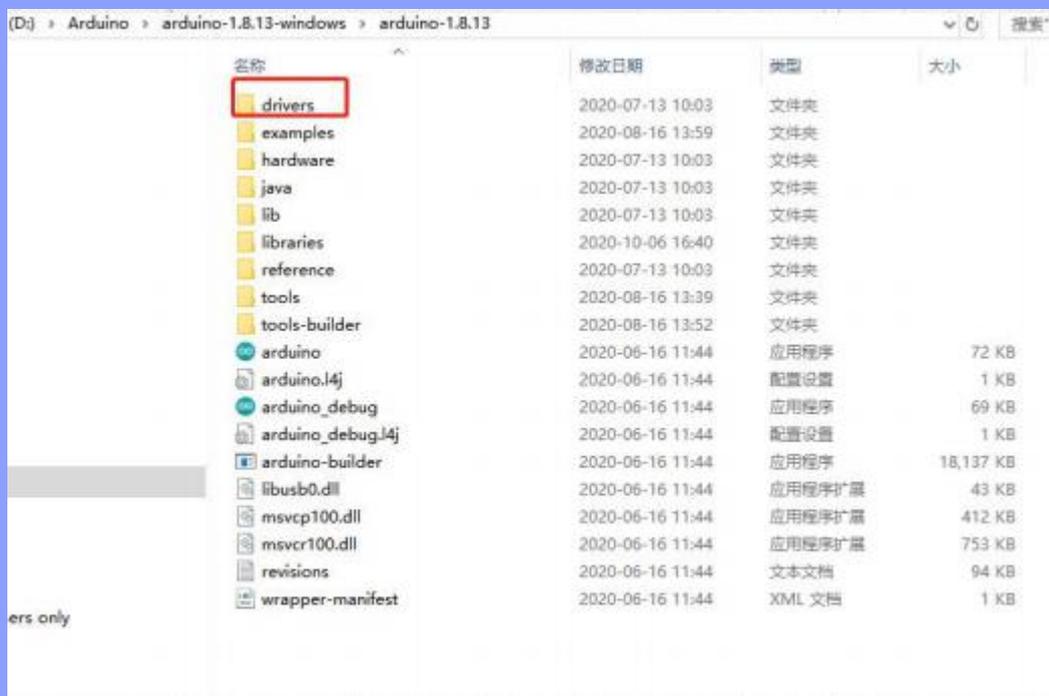


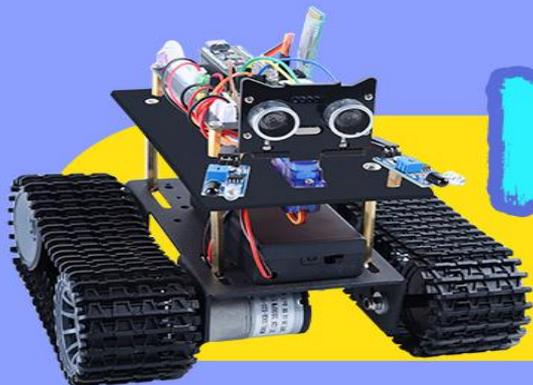


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Arduino install folder.

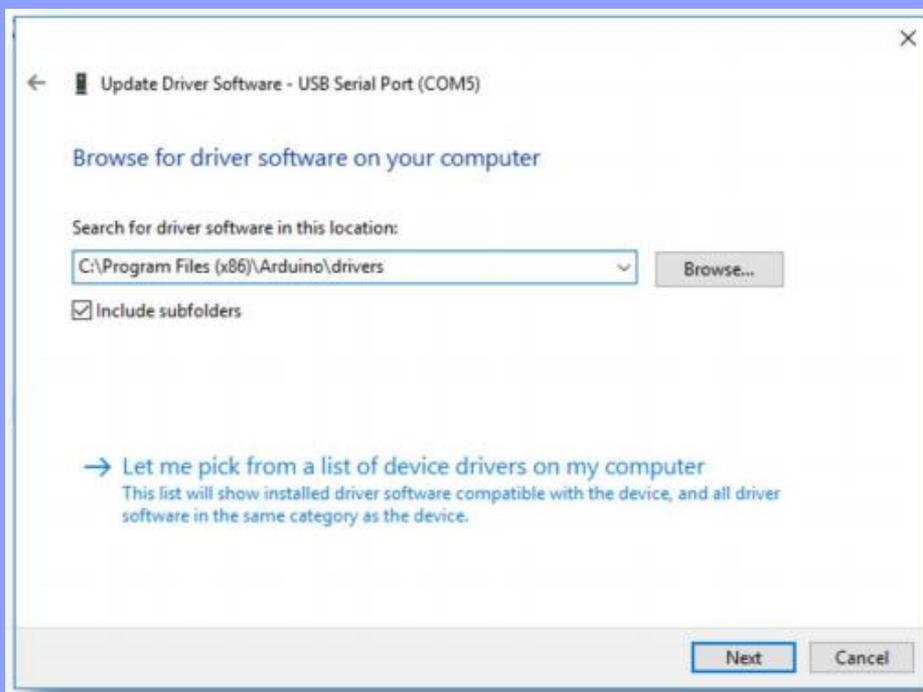


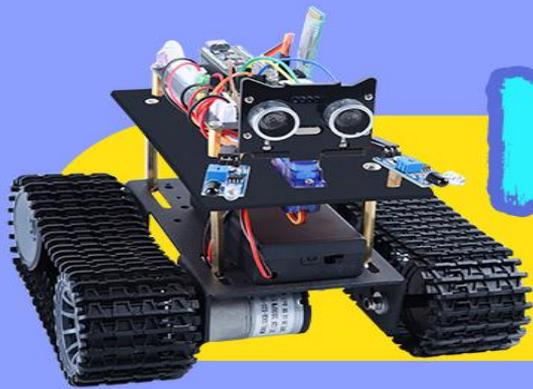


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Select the Arduino driver folder.

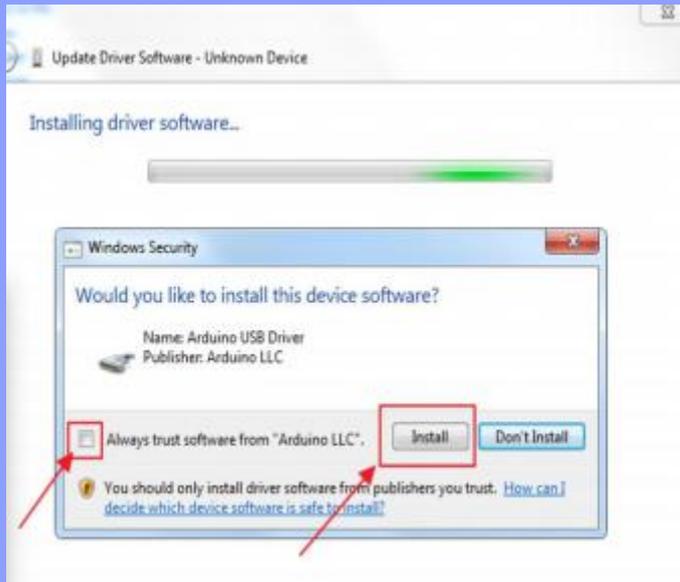




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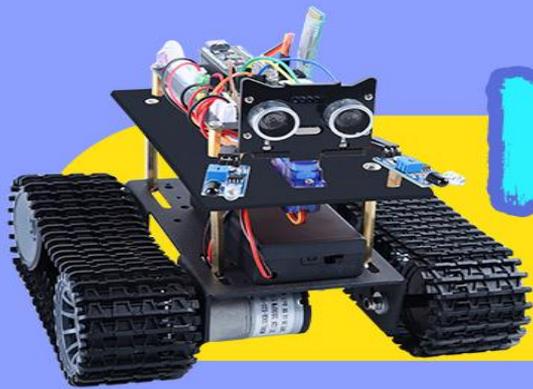
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Install Arduino USB Device.



Finally,

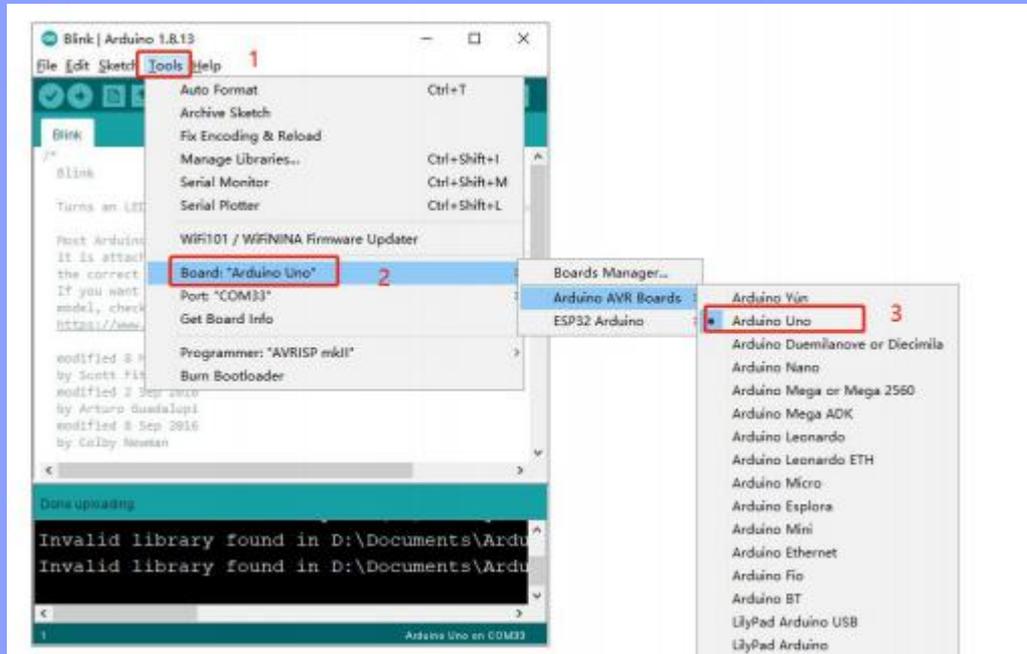


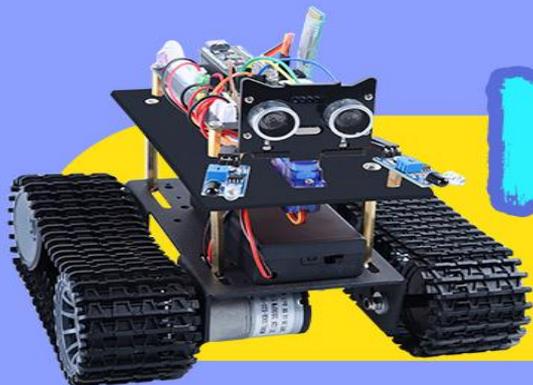


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STEP 9: After the driver is installed, please open the IDE and then click "Tools" → "Board" → "Arduino/Genuino Uno".

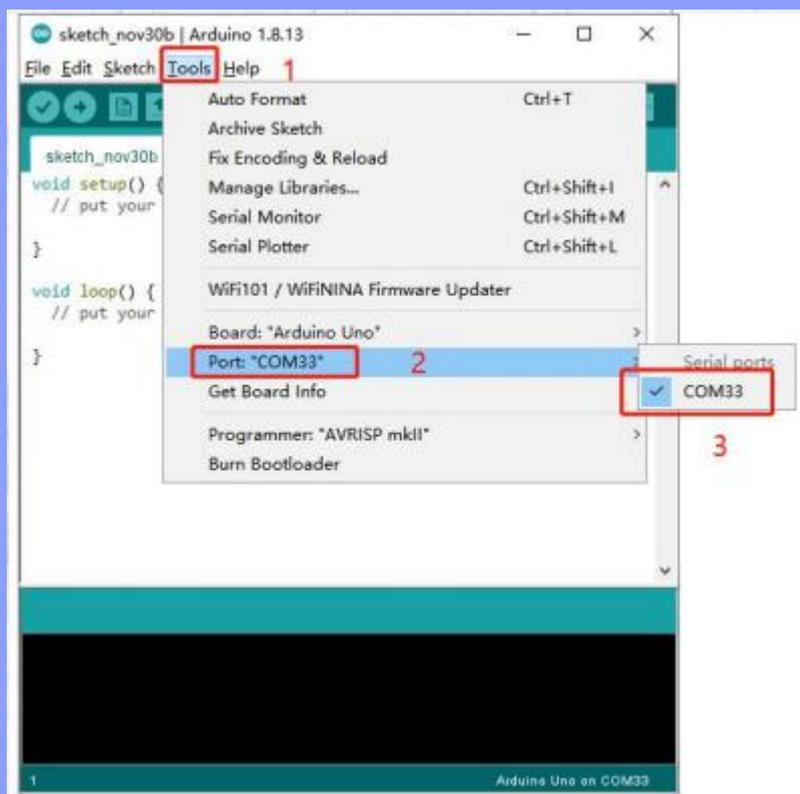


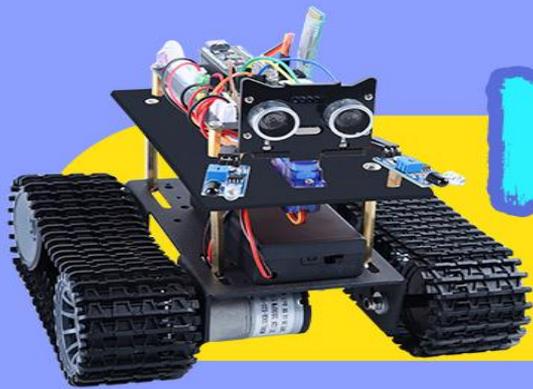


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STEP 10: Click “Tools” → “Port” → COM.





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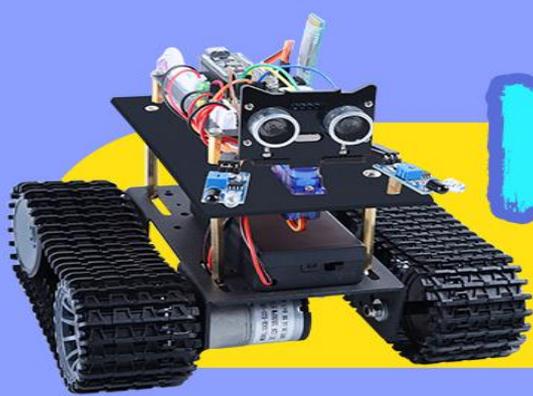
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TIPS:

When uploading codes, please remove the Bluetooth module from the IO expansion board (Because the serial port for uploading codes and Bluetooth communication is the same one and there will be conflicts). You can install the Bluetooth module after the program is uploaded.

```
AUTO_GO | Arduino 1.8.13
File Edit Sketch Tools Help
AUTO_GO $
/*****
 *          TIME:2020.10.27
 *  Development Team: Zhiyi Technology Co., Ltd.
 *          auto go
 *
 *****/

//define L298n module IO Pin
#define ENA 5
#define ENB 6
#define IN1 7
#define IN2 8
#define IN3 9
#define IN4 11
```

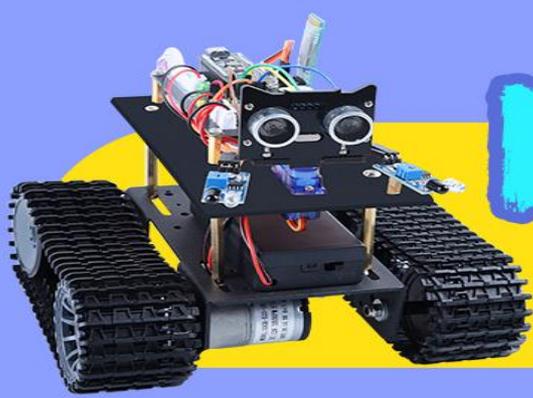


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The picture above shows that it is uploaded successfully

```
Done uploading.  
Sketch uses 2,996 bytes (9%) of program storage space. Maximum is 32,256 bytes.  
Global variables use 238 bytes (11%) of dynamic memory, leaving 1,810 bytes free.
```



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At this time, the Arduino development environment has been successfully built.