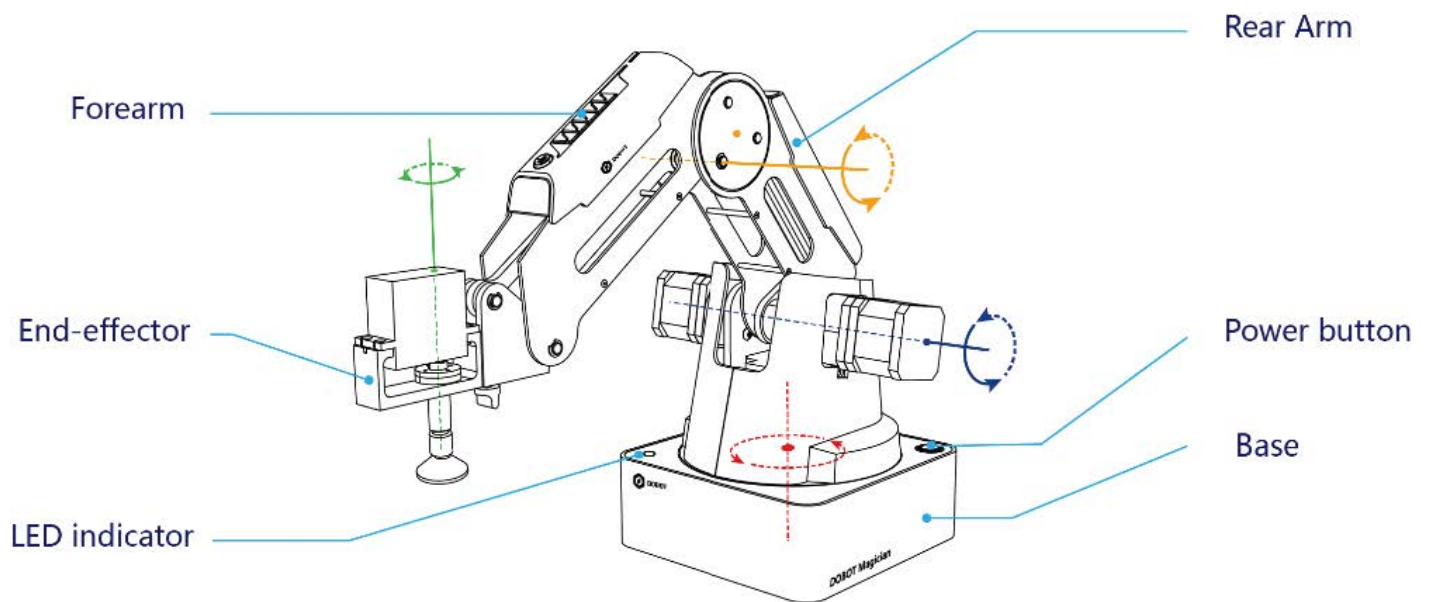


# Using Dobot Magician V2

## **Dobot Magician V2**





## What is it?

The Dobot magician is a 4 Degree of Freedom robotic arm.

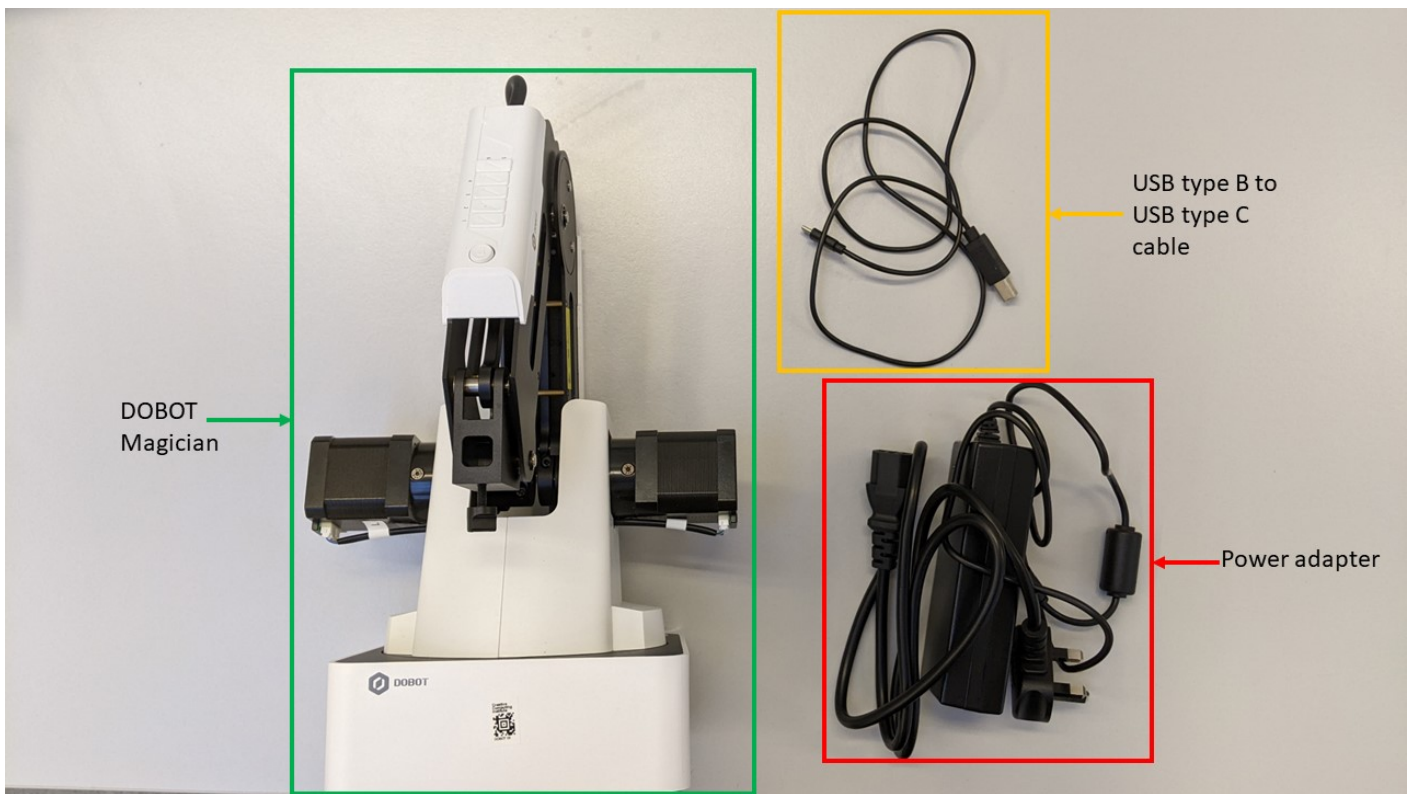
## What can it do?

Some use cases of the Dobot Magician consist of:

- Drawing or writing using its pen end-effector.
- Pick and place using its suction or fingered gripper.
- Basic 3D printing with a 3D printer nozzle end-effector add on and a prusa slicer.
- Laser etching with the laser etching add on.

## Dobot magician basic setup

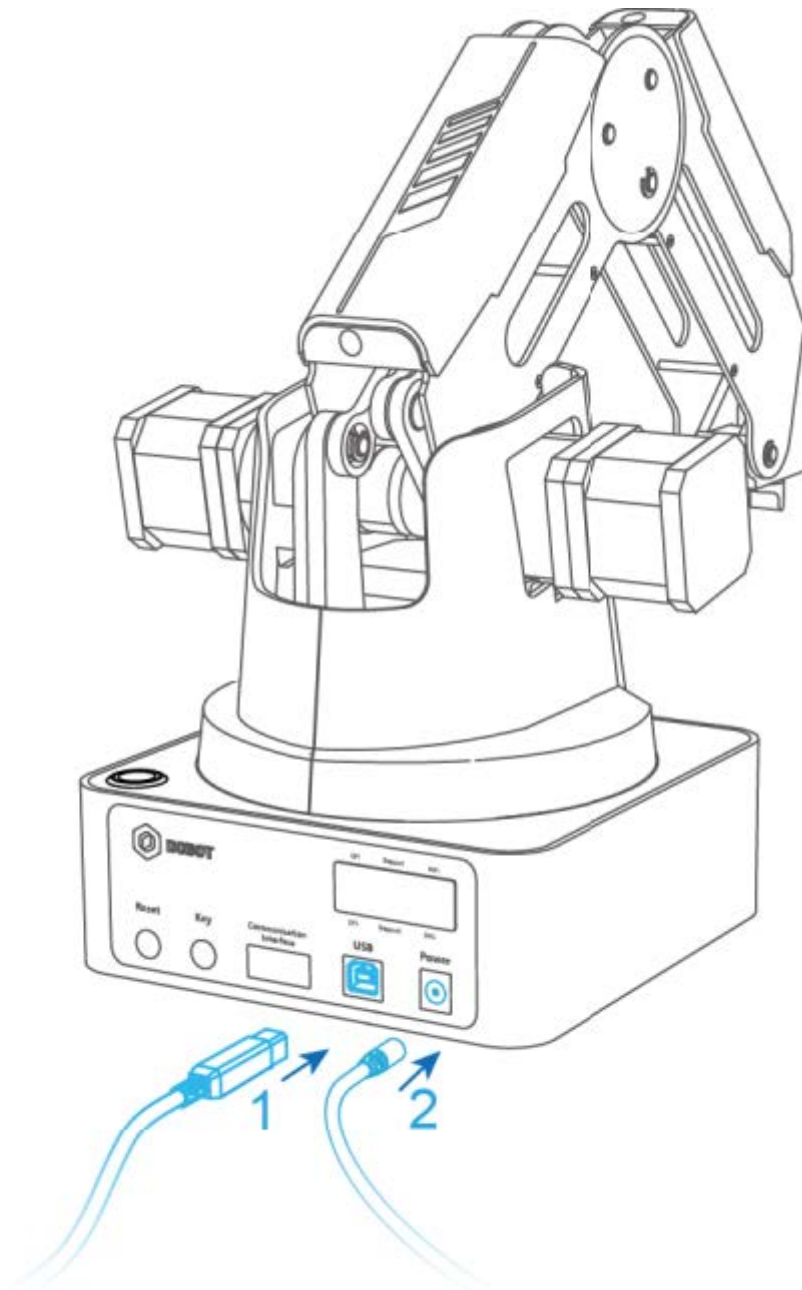
### What you will need



## The setup

**Note:** Ensure that there are no obstruction around the robot.

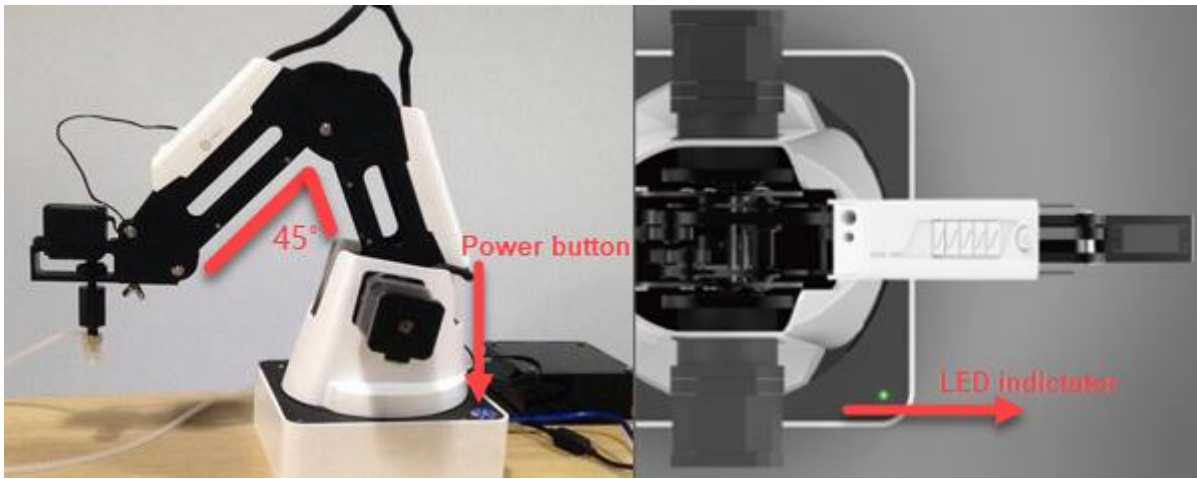
1. Connect the Dobot Magician to your computer with the supplied USB cable.
2. Connect the DObot Magician to a power source with the supplied power adapter.




## Powering on/off Dobot Magician

### Power on

Before powering on the Dobot Magician, align it into its neutral position as seen in the image below and then press down on the power button that is located on the base of the robot.



Once the robot is powered on, the LED indicator turns yellow, and all stepper motors lock. After about 7 seconds, the robot will play a short "beep" sound and the LED indicator will turn green. Now the Dobot Magician has completed its power on sequence.

**Note: If the LED indicator is red after the robot is powered on, this means that the robot arm has reached one or more of its axis limits. To get it back working, just press and hold the unlock button  located on the forearm of the robot and move it to a desired position.**

## Power off

When the LED indicator is green, press down the power button to turn off the robotic arm. In this case, the forearm moves slowly to the rear arm and stops. Then it has completed the power off sequence.

## How to control Dobot Magician?

There are two ways of controlling the Dobot magician.

1. Using DobotLab
2. Using python

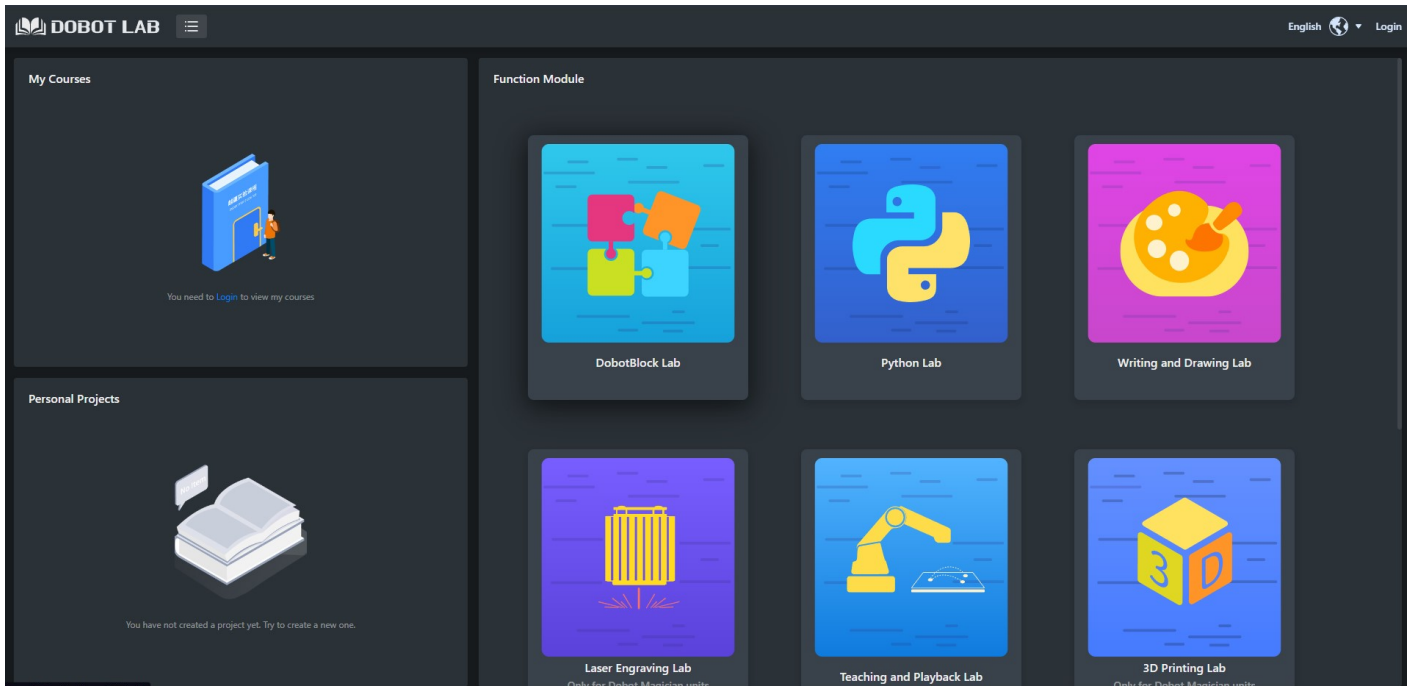
**Note: Any software or documentation for the Dobot magician can be found within the [download center](#) of Dobot's website but in order to download anything from there, you will need to create an account with them.**

## DobotLab

DoboLab is a web based interface that is used to teach, learn and work with the Dobot magician and some other Dobot products.

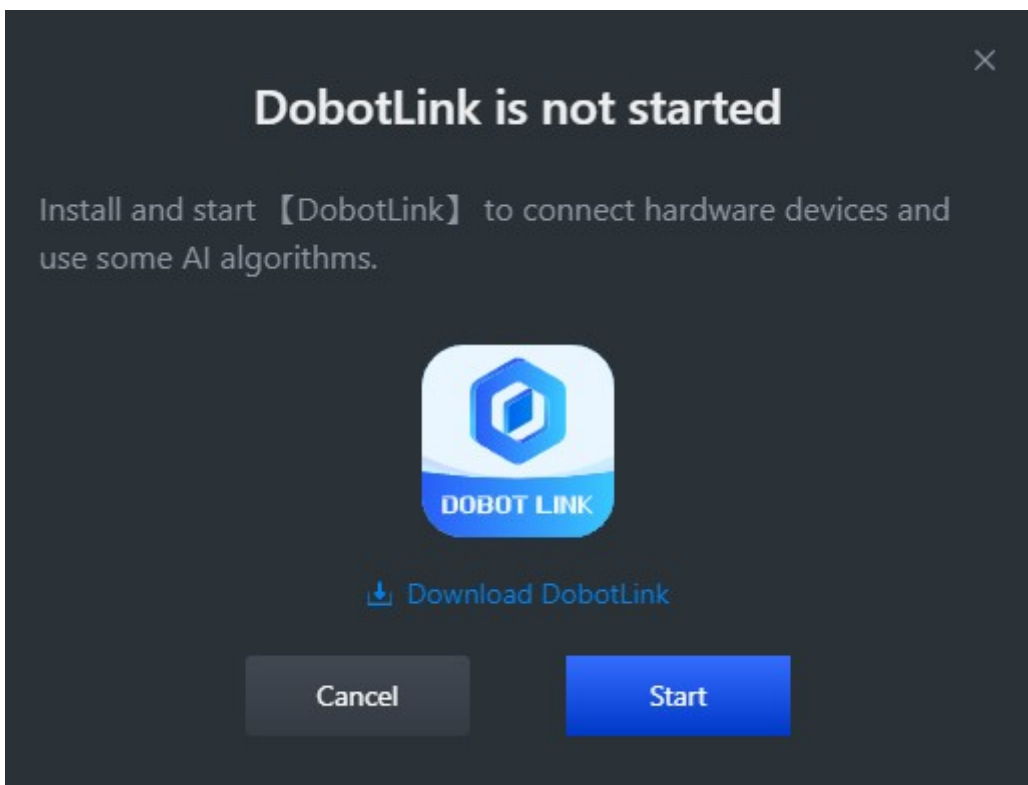


To use it , you can click [here](#) or just search for "DobotLab" on your favorite browser. It should look something like the image below.



You can register with DobotLab if you would like to save any progress but this is completely optional.

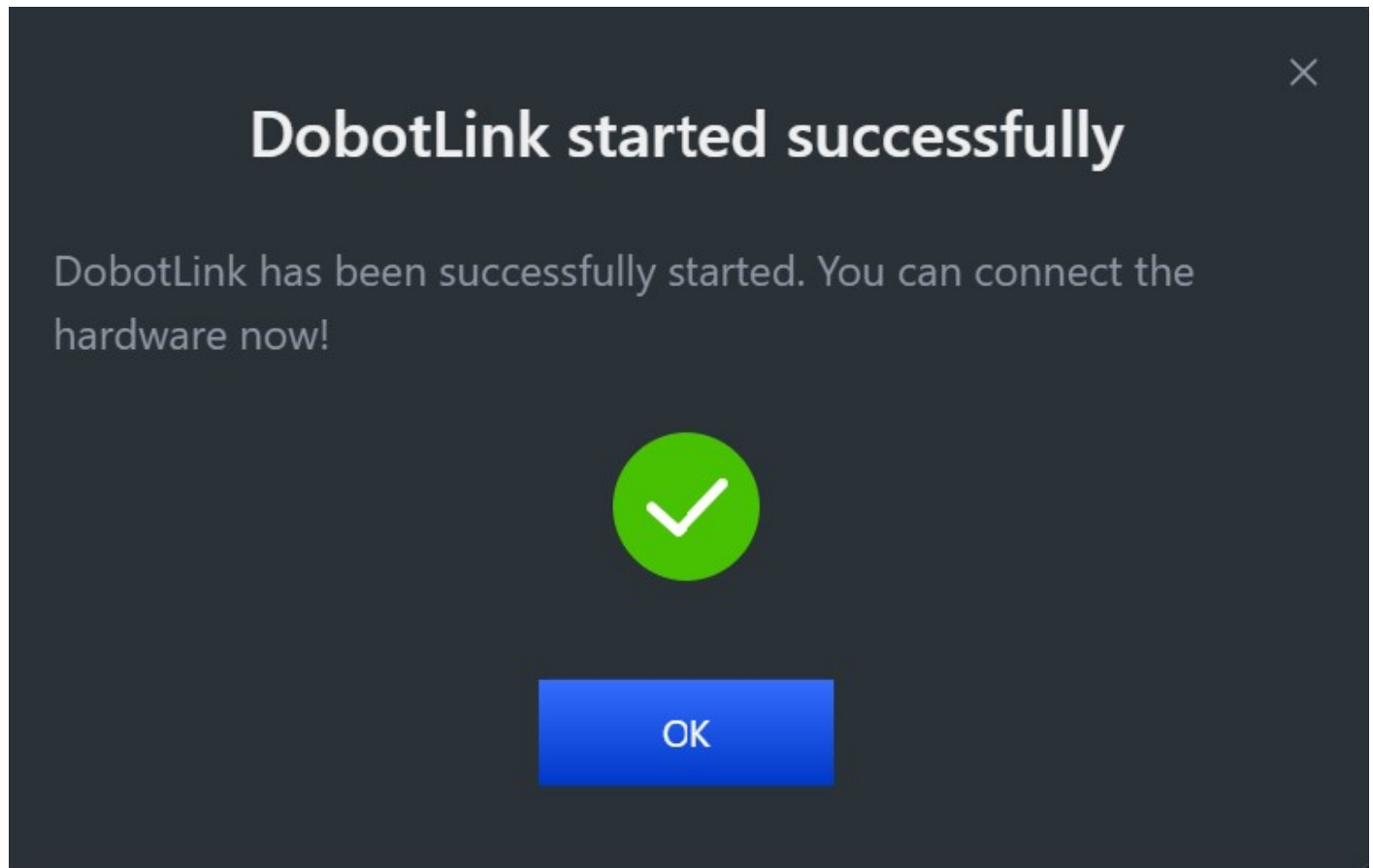
On the DobotLab page, choose any of the application tiles to work with. But once you have chosen an application tile, you will get a pop up stating "DobotLink is not started" and you will also have the option to download and install DobotLink.



DobotLink is the piece of software that has the drivers for controlling the Dobot Magician and acts as a bridge between the DobotLab and the Dobot Magician. Make sure you download and install this, as without it you will not be able to control the robot using DobotLab.

If you have previously downloaded DobotLink, click on "Start" if not download and install it and then click "Start".

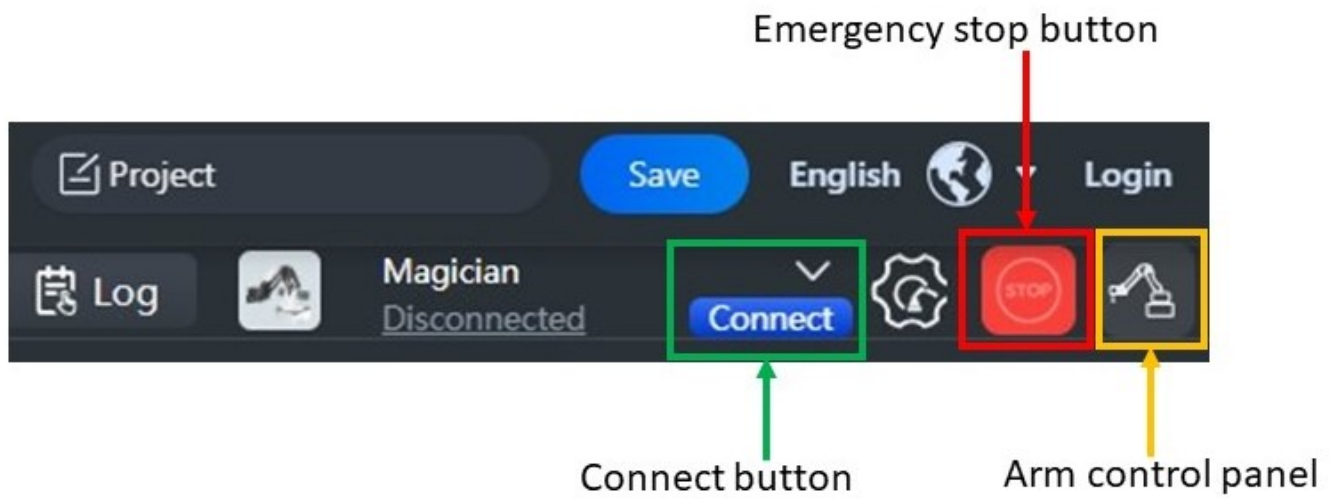
If everything goes well, the pop will say "DobotLink started successfully" as shown below.



Click "Ok" and it will continue to the chosen application.

On the application page, on the top right of the screen you should see the following.





Here, if you click on "connect", it should connect you to the robot and if you then click on the "arm control panel", a control panel such as the one given below should appear which will allow you to control the Dobot Magician.

→ Arm Control Panel

⌂ Home

Speed

X 202.07

Y 0

Z -8.41

R 0

X+

Y+

Y-

X-

Z+

R+

R-

Z-

J1 0

J2 29.5

J3 58.92

J4 0

J1+

J2+

J1-

J2-

J3+

J4+

J3-

J4-

☐ Rail 0.00

L-

L+

Speed

End Effector

Feel free to play around with the other application as well and if you need any more details, have a look at the user manual which can be found within Dobot's [download center](#). The document you will need to search for is **Dobot Magician V2 User Guide (DobotLab-based)**.

## Using python to control Dobot Magician

There are two options for controlling the Dobot magician using python.

**None of these options have undergone extensive testing, use it at your own risk.**

1. dobot-python by Alex Gustafsson (**Recommended as it uses the newer communication protocol v1.1.5**)- [click here](#)
2. pydobot, a python library for Dobot Magician by Luis Mesas - [click here](#)

## Troubleshooting

1. Serial not found error - You might get the serial not found error, it means that you don't have pyserial installed, to install it use the command `pip install pyserial` or `python3 -m pip install pyserial`.

## Frequently asked questions

1. **The LED on the robot has turned amber instead of green, what should I do?**  
If the LED on the robot has turned amber during start up, that means the robot is in a restricted area. You will need to manually move it back to its safe operating space. To do this, simply press the circular button which has a logo of an unlocked lock that is located on the forearm of the robot. While holding the button, move the arm of the robot out of the restricted area.

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Revision #4

Created 18 January 2024 13:56:00 by Rohit Ramesh Thampy

Updated 5 April 2024 17:41:38 by Rohit Ramesh Thampy