

## 5. Hardware library configuration

You can check this link: <https://pypi.org/project/Jetson.GPIO/> Or <https://github.com/NVIDIA/jetson-gpio>

### 1. Environmental configuration

1. Download jetson-gpio:

```
git clone https://github.com/NVIDIA/jetson-gpio
```

```
jetson@jetson-desktop:~$ git clone https://github.com/NVIDIA/jetson-gpio
Cloning into 'jetson-gpio'...
remote: Enumerating objects: 168, done.
remote: Counting objects: 100% (168/168), done.
remote: Compressing objects: 100% (97/97), done.
remote: Total 597 (delta 79), reused 135 (delta 48), pack-reused 429
Receiving objects: 100% (597/597), 128.43 KiB | 38.00 KiB/s, done.
Resolving deltas: 100% (267/267), done.
```

2. Move the downloaded files to the directory:/opt/nvidia. If this library exists in your directory, we need to backup the original directory as follows:

```
nano@nano-desktop:/opt/nvidia$ sudo mv jetson-gpio jetson-gpio_bak
[sudo] password for nano:
nano@nano-desktop:/opt/nvidia$ ls
jetson-gpio_bak  l4t-usb-device-mode
nano@nano-desktop:/opt/nvidia$
```

Then place the downloaded folder in the opt/nvidia/directory. Since I am placing the folder in the path~/and currently in opt/nvidia/, I can execute the following command to move the folder `sudo mv ~/jetson-gpio/`

```
jetson@jetson-desktop:/opt/nvidia$ sudo mv ~/jetson-gpio ./
[sudo] password for jetson:
jetson@jetson-desktop:/opt/nvidia$ ls
jetson-gpio  jetson-io  l4t-bootloader-config  l4t-usb-device-mode  vpi  vpi-0.4
jetson@jetson-desktop:/opt/nvidia$ cd ~
```

3. Install pip3 tool

```
sudo apt-get install python3-pip
```

4. Enter the Jetson gpio library folder and install the library.

```
cd /opt/nvidia/jetson-gpio sudo python3 setup.py install
```

```
creating dist
creating 'dist/Jetson.GPIO-2.0.12-py3.6.egg' and adding 'build/bdist.linux-aarch64/egg' to it
removing 'build/bdist.linux-aarch64/egg' (and everything under it)
Processing Jetson.GPIO-2.0.12-py3.6.egg
Copying Jetson.GPIO-2.0.12-py3.6.egg to /usr/local/lib/python3.6/dist-packages
Adding Jetson.GPIO 2.0.12 to easy-install.pth file

Installed /usr/local/lib/python3.6/dist-packages/Jetson.GPIO-2.0.12-py3.6.egg
Processing dependencies for Jetson.GPIO==2.0.12
Finished processing dependencies for Jetson.GPIO==2.0.12
```

5. Before using, you also need to create a GPIO group, add your current account to this group, and grant usage permissions

```
sudo groupadd -f -r gpio
sudo usermod -a -G gpio user_name
```

```
nano@nano-desktop:/opt/nvidia/jetson-gpio$ sudo groupadd -f -r gpio
nano@nano-desktop:/opt/nvidia/jetson-gpio$ sudo usermod -a -G gpio nano
```

```
sudo cp /opt/nvidia/jetson-gpio/lib/python/Jetson/GPIO/99-gpio.rules
/etc/udev/rules.d/
```

In order for the new rule to take effect, you need to reboot or reload the udev rule by running the following command

```
sudo udevadm control --reload-rules && sudo udevadm trigger
```

Attention: user\_Name is the username you use, such as Jetson