

## WINDOWS

1. Download Raspbian (<https://www.raspberrypi.org/downloads/raspbian/>).
2. Unzip Raspbian.
3. Format your micro SD Card as FAT32 Format.
4. Flash Raspbian image file to your micro SD card.

## Raspberry Pi

1. Insert your SD Card to Raspberry Pi.
2. Plug in the micro USB power cable.
3. Observe the red LED. (Power Indicator)
4. Observe the green LED. (Disk Access Indicator)
5. Connect to the WiFi or plug in Ethernet cable.
6. Raspi-Configuration.
  1. 5. Interfacing Options - P1 Camera - Yes - Ok
  2. Finish - Reboot
7. Update your Raspbian and install some packages.
  1. `sudo apt-get update`
  2. `sudo apt-get upgrade`
  3. `sudo apt-get install libopencv-dev`
  4. `sudo apt-get install python-opencv`
  5. `sudo apt-get install python-rpi.gpio`
8. `git clone https://github.com/shu-ramen/VeinVisualizationPi.git`
9. `cd VeinVisualizationPi`
10. `python VeinVisualizer.py`

## Device Connection

### LED Driver

Vcc (RED)	Pin #4
Ground (BLACK)	Pin #6
Signal (YELLOW)	Pin #12

### No IR Camera

Connect to Camera CSI

