

## TASK 8

How to install and setup raspberry pi:

Step 1: Purchase Raspberry Pi 3 and 32GB micro SD card

Step 2: Download Ubiquity Robotics image, <https://www.ubiquityrobotics.com/download/>

Step 3: Use Balenaetcher to flash the microSD card

Step 4: Once done, insert disk into raspberry pi

Step 5: Connect HDMI cord from raspberry pi to monitor. Connect mouse and keyboard

Step 6: Connect Power Cord to Outlet

Step 7: Connect Ethernet Cable or WiFi

Step 8: Download Venki's code from his github

Step 9: Can connect through VNC or Secure Shell

Step 10: Raspberry Pi is ready to be used

Open CV:

Step one: Follow sequence of commands

```
~sudo apt-get install ros-kinetic-opencv3
```

```
~sudo apt-get autoremove libopencv-dev python opencv
```

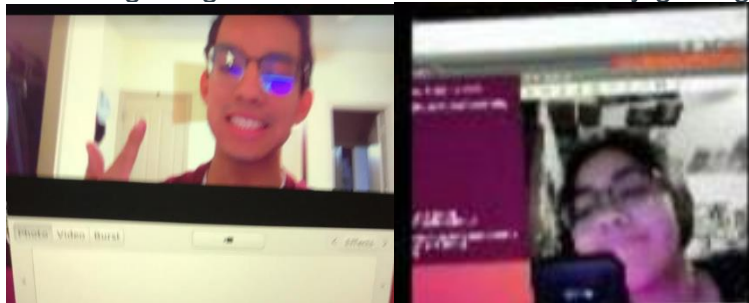
OpenCV should be successfully downloaded

Step two: Pull Venki's OpenCV code on github and place in new directory

Step three: Run tutorial code such as blob

Step four: After running blob tutorials connect raspberry pi camera. Run tutorial to get camera functioning.

Following images are Itzel & Gio successfully getting the cameras to work



Connections between raspberry pi and camera:

