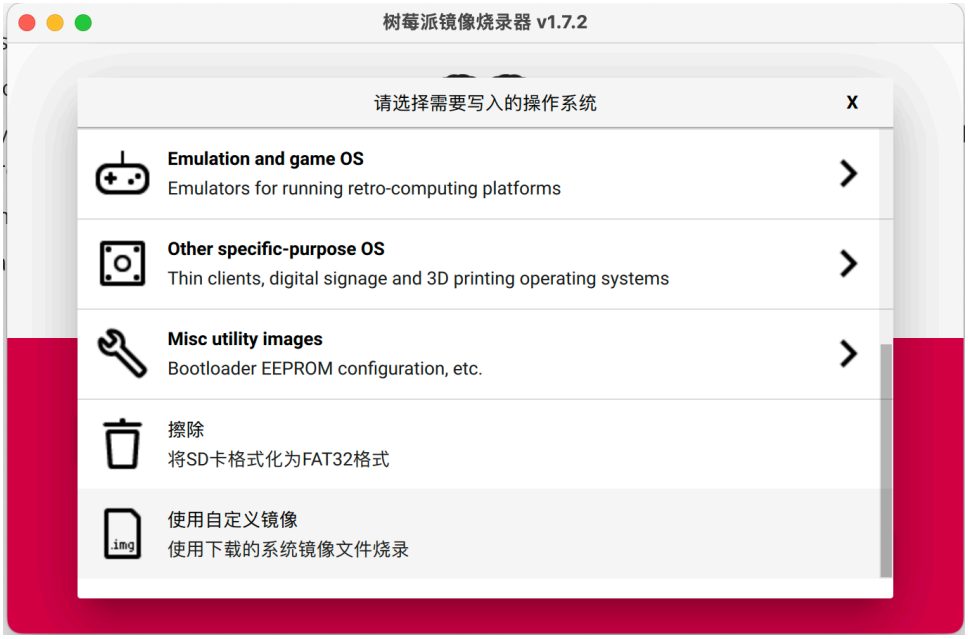
Install Ubuntu 22.04 on Raspberry Pi

1. Make sure there is AT LEAST **30** GB space in your laptop.
2. Download the image directly from the http://10.26.1.15/file/
   - It should be downloaded under the campus network!
   - If you fail to download or don't have 30 GB space available, ask the student assistants to download directly from *USB flash disk*
3. This time, DON'T CHANGE ANY FILE!
4. Use the same Raspberry Imager to install the image file onto the SD card
   - Select the "自定义" option:
   - 

5. After finishing the installation, plug all the wires to the Raspberry Pi **first**!
   - a physical network cable (RJ45) connect to your computer
   - Power cable
6. Plug the SD card into the device
7. Turn on the power
8. Open the network setting panel on your computer, mannually set the IP of the ethernet port:
   - For the ethernet port, turn off the DHCP service
   - Mannually set the ***your computer ethernet IP*** to `192.168.0.*`
   - `*` can be any number except `8` and within [0, 255]
9. Open terminal, enter `ping 192.168.0.8` and check if it is successful:
   - ```
     64 bytes from 192.168.0.8: icmp_seq=3 ttl=64 time=1.155 ms
     64 bytes from 192.168.0.8: icmp_seq=4 ttl=64 time=1.241 ms
     64 bytes from 192.168.0.8: icmp_seq=5 ttl=64 time=1.206 ms
     64 bytes from 192.168.0.8: icmp_seq=6 ttl=64 time=1.277 ms
     64 bytes from 192.168.0.8: icmp_seq=7 ttl=64 time=1.227 ms
     64 bytes from 192.168.0.8: icmp_seq=8 ttl=64 time=1.280 ms
     64 bytes from 192.168.0.8: icmp_seq=9 ttl=64 time=1.310 ms
     64 bytes from 192.168.0.8: icmp_seq=10 ttl=64 time=1.251 ms
     64 bytes from 192.168.0.8: icmp_seq=11 ttl=64 time=1.300 ms
     64 bytes from 192.168.0.8: icmp_seq=12 ttl=64 time=1.340 ms
     64 bytes from 192.168.0.8: icmp_seq=13 ttl=64 time=1.318 ms
     ```
     ```

    - The static eth0 IP of the Raspberry Pi has already been set to `192.168.0.8`
    - Check the previous documents for more detailed explanations
10. Enter `ssh ubuntu@192.168.0.8` to directly ssh to the ***device terminal***

    ```
    username: ubuntu
    password: ubuntu
    ```

    - During the future activities, you can freely ssh to the device terminal using this static IP address WHEN YOUR COMPUTER IS **PHYSICALLY** CONNECTED TO THE DEVICE
    - Check the previous documents for more detailed explanations
11. After success, in the **DEVICE TERMINAL**, enter `ip a` or `sudo ifconfig` to check the network configuration
    - Check whether if the status of `wlan0` is **UP** and an IPv4 address follows, which means the networking configuration succeeds.
    - You can look up to the `wlan0` IP, which allows you connect to the device **remotely** WHEN YOUR COMPUTER IS UNDER THE **SAME WIFI NETWORK** AS THE DEVICE
    - Check the previous documents for more information
12. If there is any problem in the previous steps:
    - *Google/Baidu it first, if there is any error prompt*
    - *If you still cannot figure it out, ask the student assistants through Wechat Group.*
13. Now you can freely explore the other usages of Ubuntu and Raspberry Pi
14. Have Fun :)