How To Set Up the SD Card With Raspberry Pi Imager:

1. Download Raspberry Pi Imager

Go to this site and download Raspberry Pi Imager:

https://www.raspberrypi.com/software/

Install it like a regular app. Nothing special.

2. Put the SD Card in Your Laptop

Take the microSD card out of the Pi
put it into the SD card adapter/or sd card reader
then plug the adapter into your laptop.

If your laptop doesn't have an SD slot, use a USB SD card reader.

3. Open Raspberry Pi Imager

When it opens you'll see three options:

- Choose Device
- Choose OS
- Choose Storage

This is where you pick everything the Pi needs.

4. Choose the Device

Click "Choose Device" and select:

Raspberry Pi Zero 2 W

5. Choose the Operating System

Click "Choose OS" and pick:

Raspberry Pi OS Lite (32-bit)

This is the version without the desktop. That's what we used for this project because it runs faster on the small Pi.

6. Choose the Storage

Click “Choose Storage” and select the SD card you plugged in.

Just double check you’re selecting the SD card and not another hard drive. (It will erase whatever you choose.)

7. Click “Next”

It will ask if you want to edit settings.

Click **Yes**.

8. Fill Out the Settings

This part matters.

A. Set the username and password

Use:

- Username: **pi**
- Password: (whatever you want)

B. Wi-Fi setup (optional but helpful)

Type in:

- Wi-Fi name
- Wi-Fi password
- Country

This makes the Pi auto-connect when it turns on.

C. Enable SSH (optional)

Turn on SSH if you want to connect to the Pi from your laptop later.

9. Click Save → Write

It will erase the SD card and reload the operating system.

When it finishes, eject the SD card like normal.

10. Put the SD Card Back Into the Pi

Now the Pi will boot as if it's brand new.

After that, you still need to put the **ai-goggles** project folder back on the SD card. You can drag and drop it by plugging the SD card into your laptop again, or by plugging the Pi into your laptop and opening the Pi's storage.

If something really messed up the Pi, re-imaging is usually the fastest way to fix it.

If the Pi Won't Connect to Wi-Fi

Sometimes the Wi-Fi just refuses to connect, and it's not your fault. Here are things to check:

- Make sure the Wi-Fi you're using has a **normal password**. If it makes you log in on a webpage after connecting, the Pi won't work with that.
- Some networks need **both** a username and password (like campus or workplace Wi-Fi). The Pi can't join those automatically.
- Check the Wi-Fi name (SSID). If it has **spaces, weird symbols, emojis, or punctuation**, the Pi might not like it. Even stuff like "!" or "#" can cause problems.
- Re-enter the Wi-Fi password in Raspberry Pi Imager. Typos happen way more than you'd think.
- When you filled out the Wi-Fi settings in Imager, make sure you chose the right **country**.
- If all else fails, try connecting the Pi to something simple like your phone's hotspot just to see if it works.
- And if nothing fixes it… honestly just try **re-imaging the SD card** again.