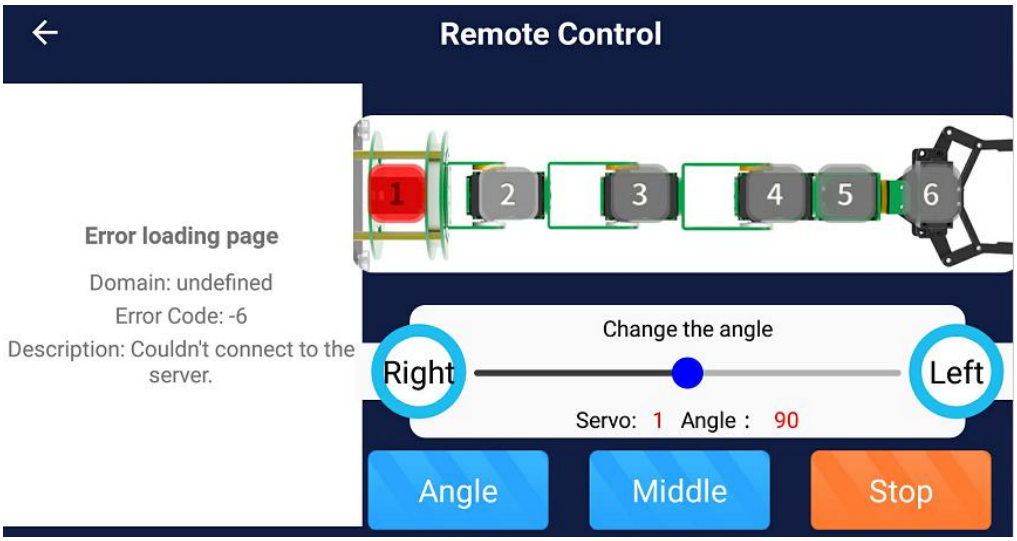
Tip:
PC software remote control and APP remote control use the same program.
The image provided by us has enabled the process by default.
Username: jetson Password: yahboom

1. Remote Control

Click the **[Remote Control]** icon, the following interface will appear on APP.

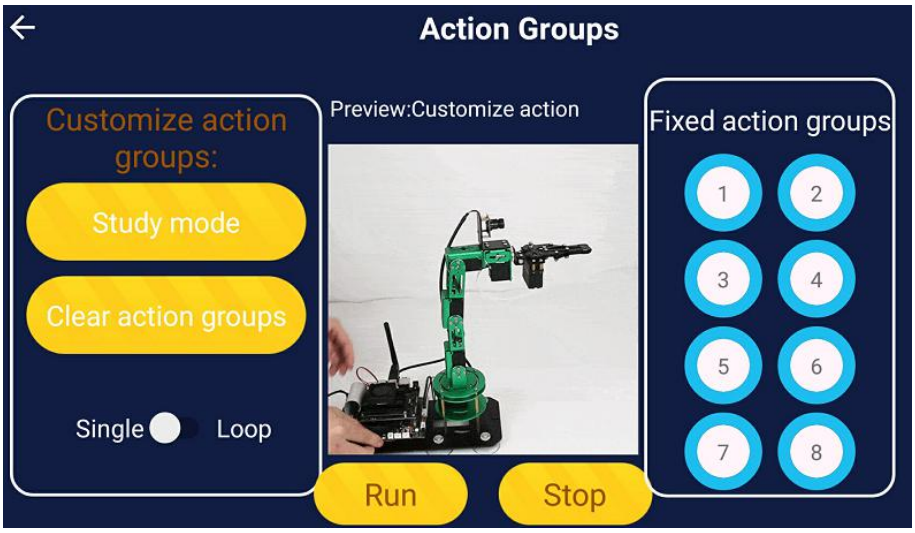


The camera screen is displayed on the left side of the APP. The numbers 1 to 6 on the schematic diagram of the DOFBOT represent the six servos. When we select the servo with the current ID number, the corresponding number will become red. Then, we can adjust the angle of the servo by dragging the slider or pressing left and right buttons.

[Angle]: After clicking this button, the APP will read the current servo angle, and update angle value to the upper slider.
[Middle]: DOFBOT returns to initial state.
[Stop]: Click this button, torque of the DOFBOT will be closed and stop receive control commands. We can manually control the angle of the servo.
Click this button again, torque of the DOFBOT will be opened, it will returns to initial state. And it starts receive control commands.

2. Action Group

Click the **[Action Group]** icon, the following interface will appear on APP.



[Run]: DOFBOT runs the current action group.

[Stop]: DOFBOT stops all actions.

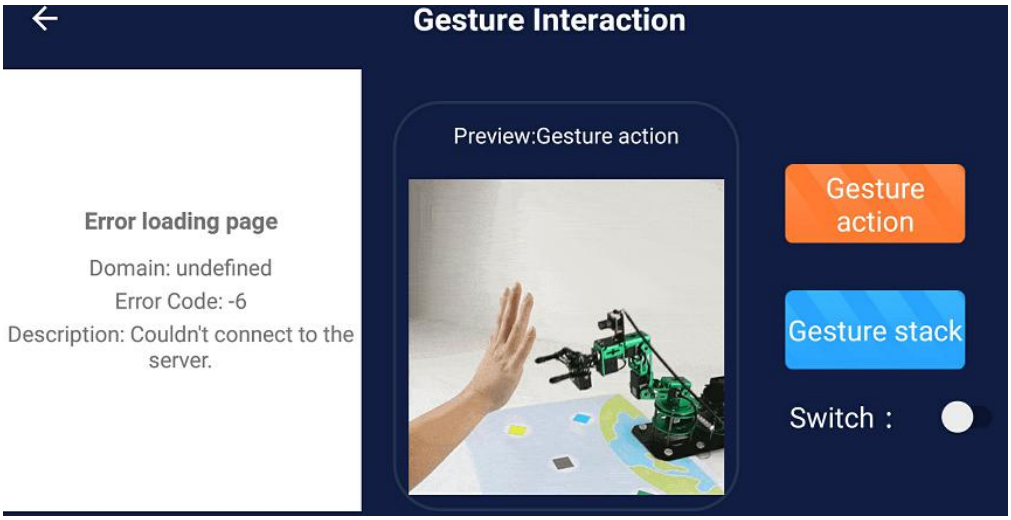
[Customize action groups]: Make the DOFBOT learn some action groups. Click [Study mode], a prompt info will pop up, and the RGB light on the extension board will become blue breathing light.

Click **[Record X Action]** button, the DOFBOT will record the current posture as an action group, and the RGB light breathing light on the expansion board will change to another color, which indicating that this action has been recorded. After recording multiple sets of actions, click **[Completed]** to exit this mode, and RGB light on the expansion board will go out.
If RGB light is red breathing light, it means that the study mode is wrong or the recorded action group is full (up to 20 actions are stored), click **[Completed]** button to exit.

[Fixed action group]: Click the different number buttons to view the function of the corresponding action group from the preview window. When you click [Run], DOFBOT will run the action group corresponding to the current number.

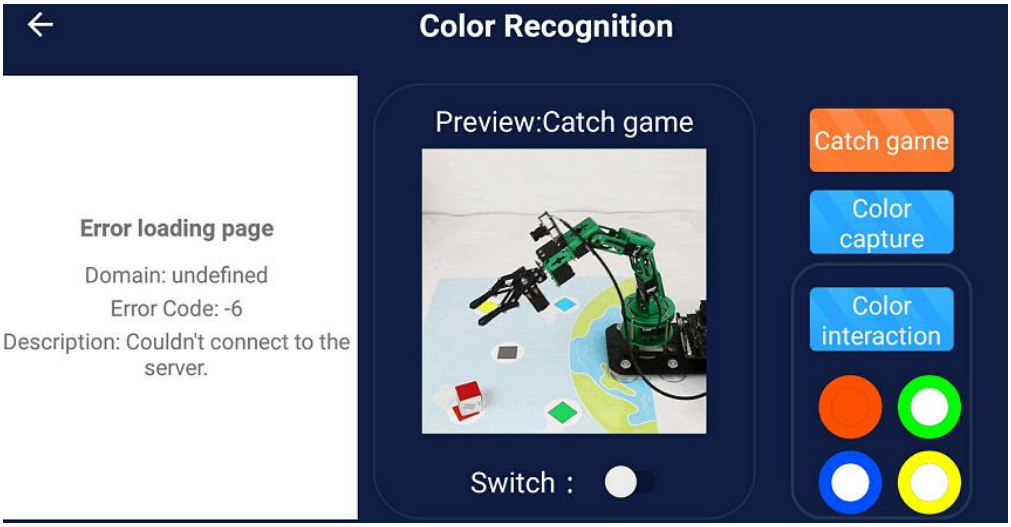
3. Gesture Interaction

Click the **[Gesture Interaction]** icon, the following interface will appear on APP.



Gesture interaction includes gesture action and gesture stack.
After selecting the corresponding function, click **[Switch]** to open this function, we can see recognized gestures the on preview window. Click **[Switch]** again to closed this function.
[Gesture action]: Recognize some gestures and perform corresponding actions.
[Gesture stack]: Recognize gesture 1, 2, 3, 4, pick up yellow, red, green, and blue blocks respectively and stack them in order. When the fist is recognized, push down all blocks and the recognition data is reset.

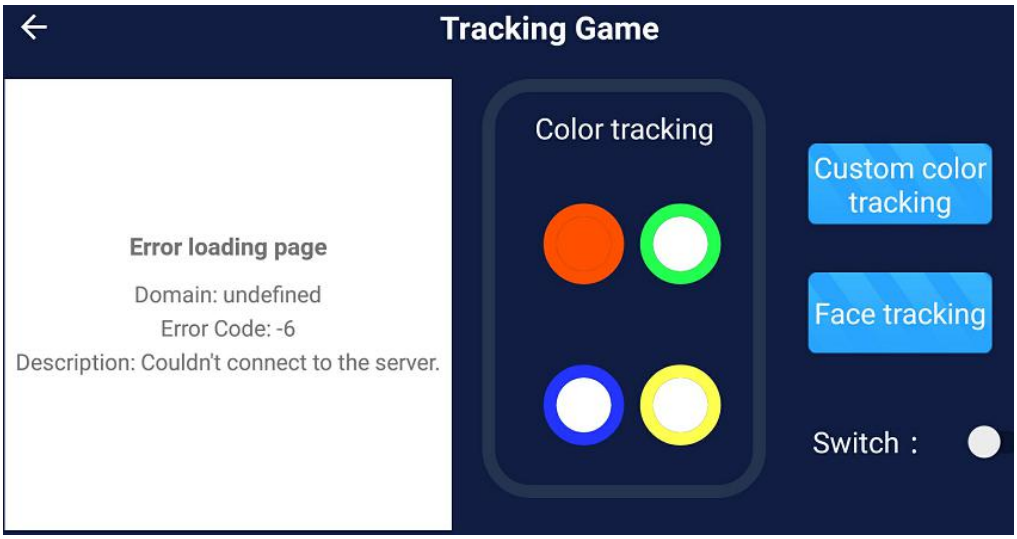
4. Color recognition
Click the **[Color recognition]** icon, the following interface will appear on APP.



Color recognition includes catch game, color capture and color interaction;
After selecting the corresponding function, click **[Switch]** to open this function, we can see recognized gestures the on preview window. Click **[Switch]** again to closed this function.
[Catch game]: Place the block in the area recognized by the camera, DOFBOT will automatically recognize the currently color, and catch the block and put it in the area of the corresponding color on map.
[Color capture]: Place the block on the camera, after DOFBOT recognizes the color of the block, it

catch the block from the corresponding color area to the middle area on map.
[Color interaction]: After selecting the color below, then, open the play switch and place the blocks of the corresponding color in front of the camera of DOFBOT. It will imitate the movement of the snake. The specific phenomenon can be viewed on the preview window.

5. Tracking game
Click the **[Tracking game]** icon, the following interface will appear on APP.



Color recognition includes color tracking, custom color tracking and face tracking;
After selecting the corresponding function, click **[Switch]** to open this function, we can see recognized gestures the on preview window. Click **[Switch]** again to closed this function.
[Color tracking]: Select the color on APP, open the switch, and put the block of the corresponding color in front of the camera, move the block, DOFBOT will move with the block.
[Custom color tracking]: Click this button, t will display a box on camera video, place the block in the area recognized by the camera. After accurately obtaining the color of the block, open the switch, DOFBOT will move with the block.
[Face Tracking]: If a face is detected, DOFBOT will mark it and move with the face.

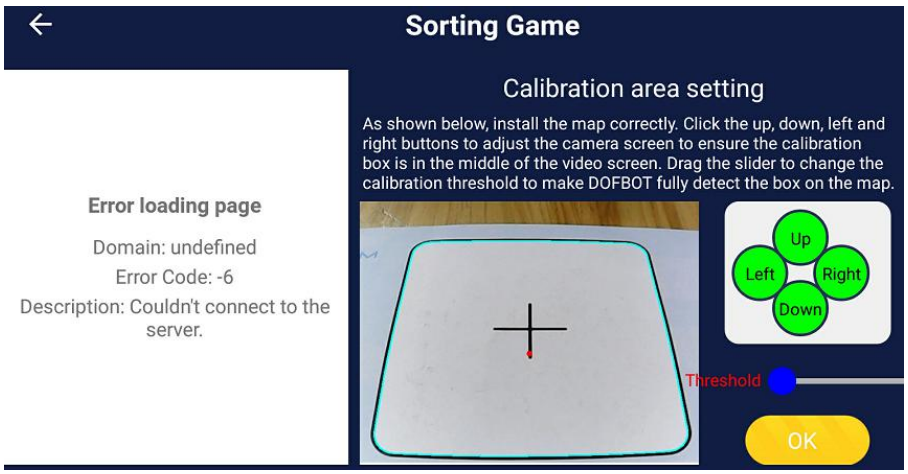
6. Garbage Sorting
Click the **[Garbage Sorting]** icon, the following interface will appear on APP.

Open the switch and the system will automatically load the model. After the red prompt [Model-Loading...] in the video disappears, place the block with the garbage picture in the area recognized by the camera. DOFBOT can identify the type of garbage on the current block and display result on the APP.

After the same garbage is recognized 10 times continuously, DOFBOT will sort it to the corresponding location on the map according to the garbage category.

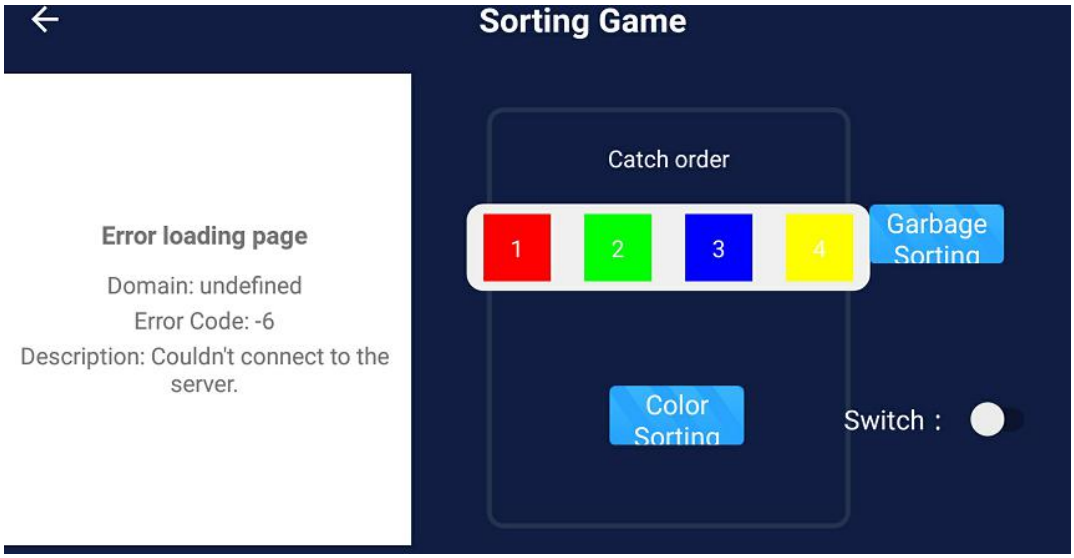
7. Advanced Setting(Beta)

Click the **[Advanced Setting(Beta)]** icon, the following interface will appear on APP.



Pressing **[Up, Down, Left, Right]** buttons to move the DOFBOT to make the frame appears completely in the field of view. Then, slide the slider of **[Threshold]** to adjust the frame detection threshold until the four sides of the frame are completely detected, as shown above.

Click [Ok] to enter the [Sorting Game] interface, as shown below.

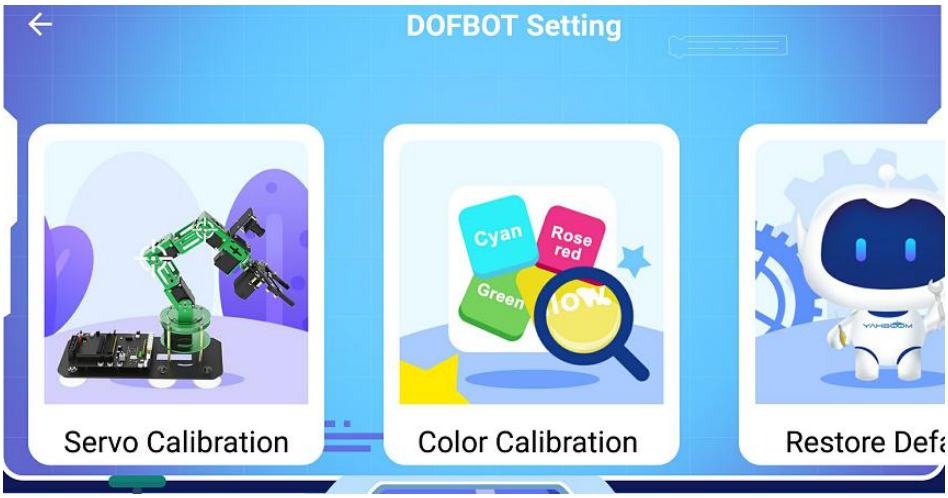


[Color sorting]: Click [1], [2], [3], [4] to change the color (black is not selected).
Place different color blocks in the area recognized by the camera, wait for the color to be recognized. Click [Switch] to enable this function

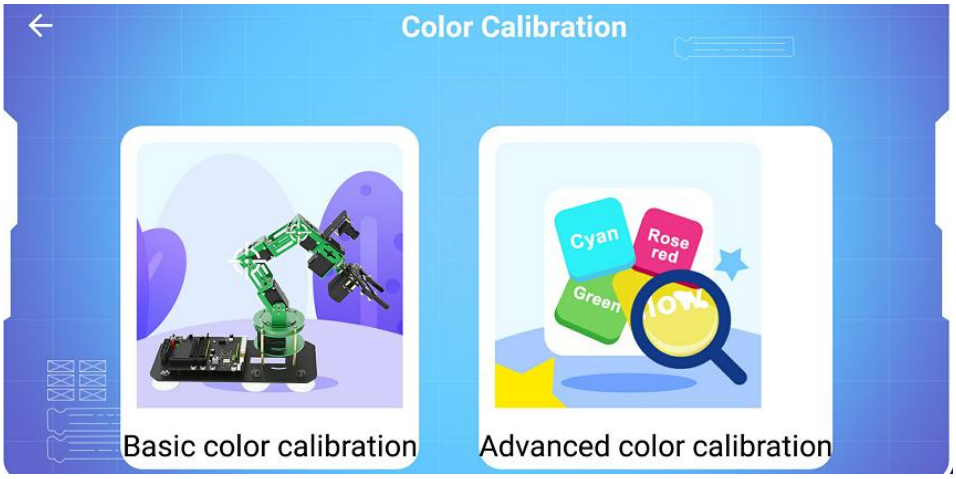
[Garbage Sorting]: Click the [Garbage Sorting], wait patiently for the model to load, and then place the block with the garbage picture in the area recognized by the camera. The system will automatically recognize the currently garbage. Click [Switch] to enable this function.

8.DOFBOT Setting

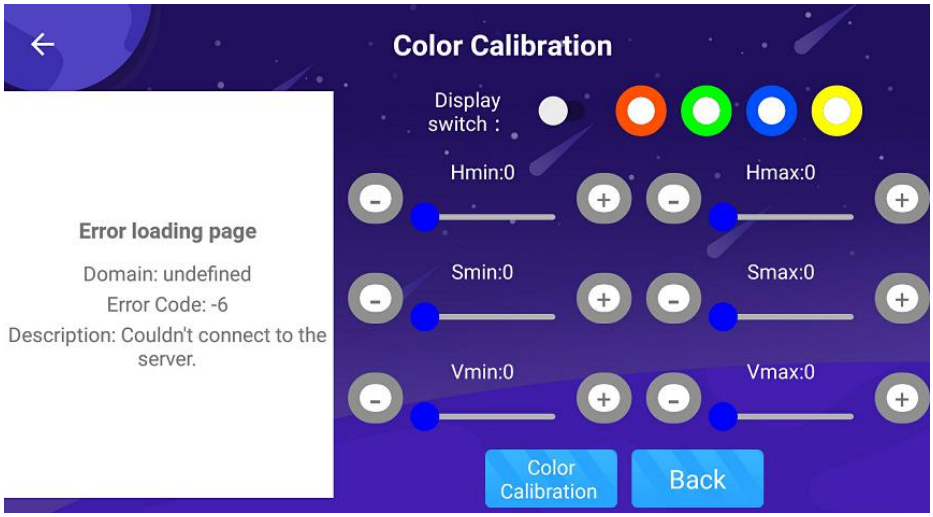
Click the **[DOFBOT Setting]** icon, the following interface will appear on APP.

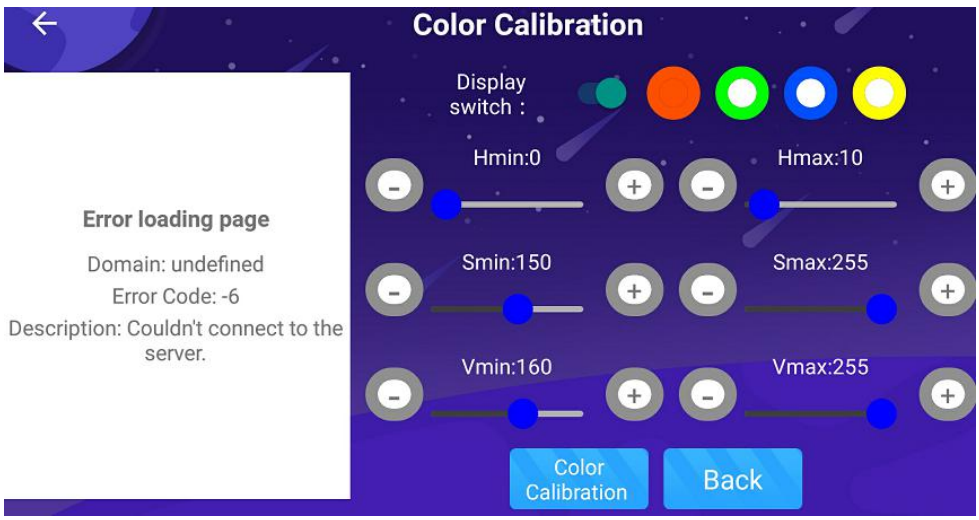


DOFBOT setting includes servo calibration, calibration, and restore the default.
[Servo Calibration]: The function is the same as that in the **[Guide: Servo calibration]**.



Color calibration includes basic color calibration and advanced color calibration.
[Basic color calibration]: The function is the same as that in the **[Guide: Color calibration]**.





[Advanced color calibration]: Place four color blocks in the field of view at the same time, select the

color that needs to be calibrated. Then, click the [display switch] button to view the black and white image, and adjust through the HSV slider until it is not detected others colors. Next, click [Color Calibration] to complete the calibration of this color, and calibrate other colors in the same way. Finally, click [Finish] to end this step.
For details, please see the course [AI Vision Course]--[Color Calibration].

[Restore default]: Clear the configuration information of the APP.