Dog's front-to-back and left-to-right translation and gait movement

1. Purpose of the experiment

Understanding and implementing the dogzilia's front-to-back and left-to-right translation and gait movements

2. Experimental path source code

Enter the robot dog system, end the robot dog program, enter "ip (ip is the robot dog's ip): 8888" in the browser, and enter the password "yahboom"

Then log in and go to **cd ~/DOGZILLA_Lite_class/3.Dog Base Control/01.Dog_move** and run **Dog_move.ipynb** .

3. Experimental Phenomenon

After running each source code, if you want to control the movement of the dog, just drag the corresponding slider value, and the dog will move according to different data. **Speed = step frequency x stride**

4. Main source code analysis

1. dog.gait_type('trot') #dogzilia's movement posture

- trot: The basic principle of running posture: first the left hind leg and the right front leg step out together, then the right hind leg and the left front leg step out together. For detailed introduction to the gait principle, please refer to the **Dog Trot Gait.ppt file in the data. The graphical programming method in PPT is not available in this version of the robot dog.**
- walk: Walking posture: a static gait, that is, during the movement, three legs are always in the support phase, and at most one leg is in the swing phase. For detailed introduction to the gait principle, please refer to the **Dog Walk Gait.ppt file in the data. The graphical programming method in PPT is not available in this version of the robot dog.**
- high_walk: High-leg posture. **It is recommended that this dog should not use this posture, as it may not be able to move normally.**

1. dog.pace('slow') #dogzilia's frequency

- slow: jogging pace
- normal: normal pace
- high: fast pace

1. dog.move('x',x)

- 'x': front and back direction
- x: the step length forward and backward, range [-25, 25]
- 'y': left and right direction
- y: The step length to the left and right, range [-18,18]