3. PC control

3.1 Start

Open jupyterLab client, find the code path:

```
DOGZILLA/Samples/2_Control/9.dog_Ctrl.ipynb
```

By default g_ENABLE_CHINESE=False, if you need to display Chinese, please set g_ENABLE_CHINESE=True.

```python
# 中文开关，默认为英文 Chinese switch. The default value is English
g_ENABLE_CHINESE = False

Name_widgets = {
    'Stop': ("Stop", "停止"),
    'Forward': ("Forward", "前进"),
    'Backward': ("Backward", "后退"),
    'Left': ("Left", "左平移"),
    'Right': ("Right", "右平移"),
    'TurnLeft': ("TurnLeft", "向左转"),
    'TurnRight': ("TurnRight", "向右转"),
    'Normal': ("Normal", "默认步频"),
    'Slow': ("Slow", "慢速步频"),
    'High': ("High", "高速步频"),
    "Step":("Step", "步伐宽度"),
    'Lie_Down': ("Lie_Down", "趴下"),
    'Stand_Up': ("Stand_Up", "站起"),
    'Crawl': ("Crawl", "匍匐前进"),
    'Turn_Around': ("Turn_Around", "转圈"),
    'Mark_Time': ("Mark_Time", "原地踏步"),
    'Squat': ("Squat", "蹲起"),
    'Turn_Roll': ("Turn_Roll", "转动Roll"),
    'Turn_Pitch': ("Turn_Pitch", "转动Pitch"),
    'Turn_Yaw': ("Turn_Yaw", "转动Yaw"),
    '3_Axis': ("3_Axis", "三轴联动"),
    'Pee': ("Pee", "撒尿"),
    'Sit_Down': ("Sit_Down", "坐下"),
    'Wave_Hand': ("Wave_Hand", "招手"),
    'Stretch': ("Stretch", "伸懒腰"),
    'Wave_Body': ("Wave_Body", "波浪"),
    'Swing': ("Swing", "左右摇摆"),
    'Pray': ("Pray", "求食"),
    'Seek': ("Seek", "找食物"),
    'Handshake': ("Handshake", "握手"),
    'Play_Ball':("Play_Ball", "踢球"),
    'Rotation': ("Rotation", "动作轮播"),
    'Reset': ("Reset", "恢复初始姿态"),
    'Translation_X': ("Translation_X", "前后平移"),
    'Translation_Y': ("Translation_Y", "左右平移"),
    'Translation_Z': ("Translation_Z", "身高调节"),
    'Attitude_roll': ("Attitude_roll", "滚转角"),
    'Attitude_pitch': ("Attitude_pitch", "俯仰角"),
    'Attitude_yaw': ("Attitude_yaw", "偏航角"),
    'Close_Camera': ("Close_Camera", "关闭摄像头")
}
```

Click to run all cells, then pull to the bottom, you can see the generated controls.
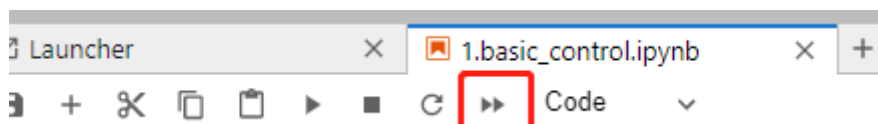
On the left is the camera display, and on the right is the controls that control the robot dog.

3.2 Control function explanation

The drag bar and button below control the speed, drag the slide bar to modify the pace width of the robot dog, and the button to modify the step frequency of the robot dog.

The button below controls the motion of the robot dog, and the motion speed depends on the speed parameter set above.

The translation slider controls the body to translate in the X, Y, and Z directions when the robot dog's feet are still, and the Z direction can control the height of the body.

The attitude slider controls the ROLL PITCH YAW attitude angle of the body when the robot dog's feet are not moving.

The buttons below control the action of the robot dog, and multiple actions are preset inside for performance.

Lie_Down	Stand_Up	Crawl	Turn_Around
Mark_Time	Squat	Turn_Roll	Turn_Pitch
Turn_Yaw	3_Axis	Pee	Sit_Down
Wave_Hand	Stretch	Wave_Body	Swing
Pray	Seek	Handshake	Play_Ball

The last is reset the robot dog and controls. Close_Camera is used to close the camera process to avoid occupying the camera all the time.

Reset	Close_Camera