

# Gesture Recognition Issue Solution (App Control)

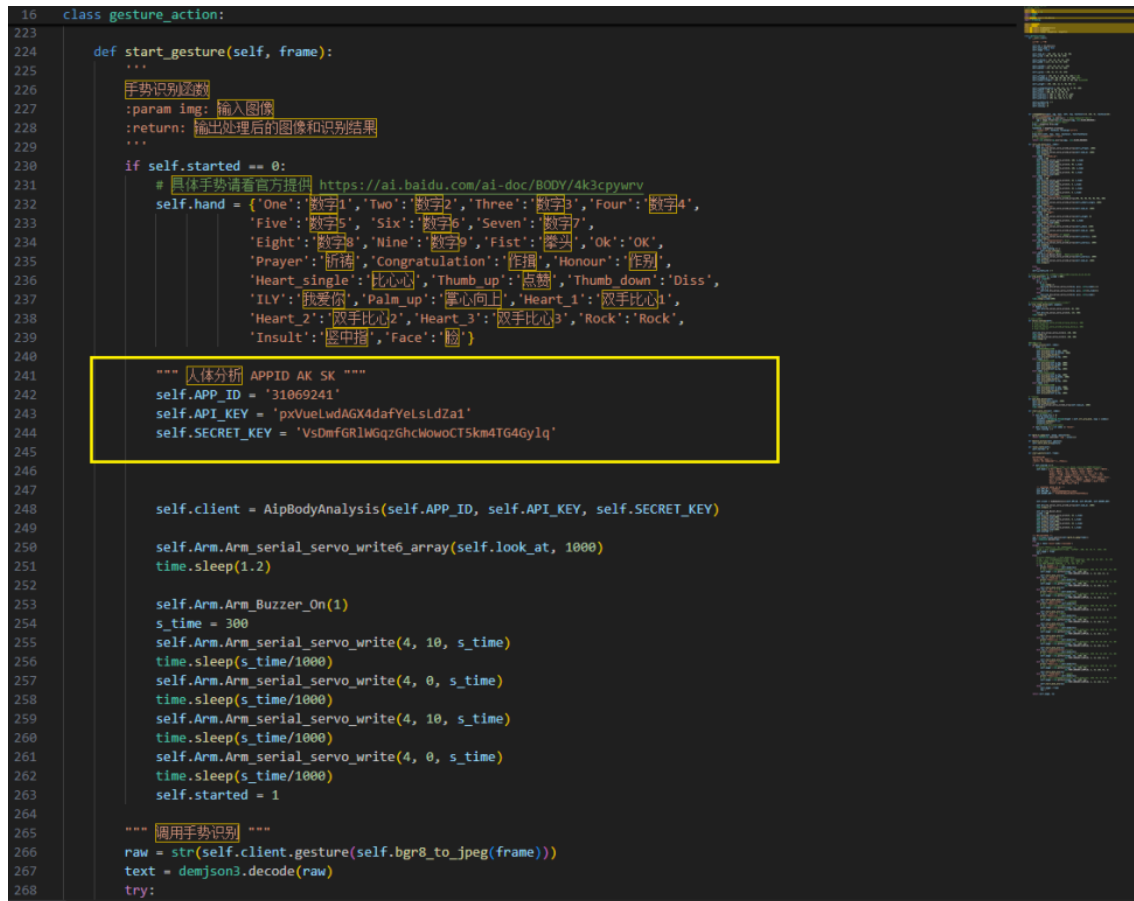
Turn on the robotic arm and connect to it using the terminal.

## I. Modify the Baidu Gesture Recognition APP\_ID information for gesture actions.

1. Open the gesture action file:

```
nano /home/jetson/colcon_ws/src/dofbot_gesture/gesture_action.py
```

2. Scroll down to the `start_gesture` function, find the APP\_ID information, and replace it with your own Baidu ID information. For instructions on how to apply for an ID, please refer to the course documentation for [Gesture Recognition]. Overseas users who cannot access the Baidu website can contact technical support for assistance.
3. Press Ctrl+S to save, then Ctrl+X to exit.



```
16 class gesture_action:
223
224 def start_gesture(self, frame):
225     ...
226     # 手势识别函数
227     :param img: 输入图像
228     :return: 输出处理后的图像和识别结果
229     ...
230
231 if self.started == 0:
232     # 具体手势请官方提供 https://ai.baidu.com/ai-doc/800V/4k3cpxwrv
233     self.hand = {'One': '数字1', 'Two': '数字2', 'Three': '数字3', 'Four': '数字4',
234                 'Five': '数字5', 'Six': '数字6', 'Seven': '数字7',
235                 'Eight': '数字8', 'Nine': '数字9', 'Fist': '拳头', 'Ok': 'OK',
236                 'Prayer': '祈祷', 'Congratulation': '作揖', 'Honour': '作别',
237                 'Heart_single': '比心心', 'Thumb_up': '点赞', 'Thumb_down': 'Diss',
238                 'ILY': '我爱你', 'Palm_up': '掌心向上', 'Heart_1': '双手比心1',
239                 'Heart_2': '双手比心2', 'Heart_3': '双手比心3', 'Rock': 'Rock',
240                 'Insult': '竖中指', 'Face': '脸'}
241
242     """ 人体分析 APPID AK SK """
243     self.APP_ID = '31069241'
244     self.API_KEY = 'pxVueLwdAGX4dafYeLsldZa1'
245     self.SECRET_KEY = 'VsDmFGRlWGqzGhcWowoCT5km4TG46y1q'
246
247
248     self.client = AipBodyAnalysis(self.APP_ID, self.API_KEY, self.SECRET_KEY)
249
250     self.Arm.Arm_serial_servo_write6_array(self.look_at, 1000)
251     time.sleep(1.2)
252
253     self.Arm.Arm_Buzzer_On(1)
254     s_time = 300
255     self.Arm.Arm_serial_servo_write(4, 10, s_time)
256     time.sleep(s_time/1000)
257     self.Arm.Arm_serial_servo_write(4, 0, s_time)
258     time.sleep(s_time/1000)
259     self.Arm.Arm_serial_servo_write(4, 10, s_time)
260     time.sleep(s_time/1000)
261     self.Arm.Arm_serial_servo_write(4, 0, s_time)
262     time.sleep(s_time/1000)
263     self.started = 1
264
265     """ 调用手势识别 """
266     raw = str(self.client.gesture(self.bgr8_to_jpeg(frame)))
267     text = demjson3.decode(raw)
268     try:
```

## II. Modify the Baidu Gesture Recognition APP\_ID information for gesture stacking.

1. Open the gesture stacking file:

```
nano /home/jetson/colcon_ws/src/arm_gesture_stacking/gesture_stack.py
```

2. Scroll down to the `Gesture_Action` function, find the APP\_ID information, and replace it with your own Baidu ID information. For instructions on how to apply for an ID, please refer to the course documentation for [Gesture Recognition]. Overseas users who cannot access the Baidu website can contact technical support for assistance.

```
16 class gesture_stack:
17     return bytes(cv2.imencode('.jpg', value)[1])
18
19
20 def reset_state(self):
21     self.started = 0
22
23 def Gesture_Action(self, frame):
24     if self.started == 0:
25         # 具体手势请查看官方提供 https://ai.baidu.com/ai-doc/BODY/4k3cpywrv
26         self.hand = {'One': '数字1', 'Two': '数字2', 'Three': '数字3', 'Four': '数字4',
27                     'Five': '数字5', 'Six': '数字6', 'Seven': '数字7',
28                     'Eight': '数字8', 'Nine': '数字9', 'Fist': '拳头', 'Ok': 'OK',
29                     'Prayer': '祈祷', 'Congratulation': '作揖', 'Honour': '作别',
30                     'Heart_single': '比心1', 'Thumb_up': '点赞', 'Thumb_down': 'Diss',
31                     'ILY': '我爱你', 'Palm_up': '掌心向上', 'Heart_1': '双手比心1',
32                     'Heart_2': '双手比心2', 'Heart_3': '双手比心3', 'Rock': 'Rock',
33                     'Insult': '竖中指', 'Face': '脸'}
34
35         """ 人体分析 APPID AK SK """
36         self.APP_ID = '31069241'
37         self.API_KEY = 'pxVueLwdAGX4dafYeLsdZa1'
38         self.SECRET_KEY = 'VsDmFGRLwGqzGhcWowoCT5km4TG4Gylq'
39
40         self.client = AipBodyAnalysis(self.APP_ID, self.API_KEY, self.SECRET_KEY)
41
42         self.Arm.Arm_serial_servo_write6_array(self.look_at, 1000)
43         time.sleep(1.2)
44
45         self.Arm.Arm_Buzzer_On(1)
46         s_time = 300
47         self.Arm.Arm_serial_servo_write(4, 10, s_time)
48         time.sleep(s_time/1000)
49         self.Arm.Arm_serial_servo_write(4, 0, s_time)
50         time.sleep(s_time/1000)
51         self.Arm.Arm_serial_servo_write(4, 10, s_time)
52         time.sleep(s_time/1000)
53         self.Arm.Arm_serial_servo_write(4, 0, s_time)
54         time.sleep(s_time/1000)
55         self.started = 1
56
57     """ 2. 调用手势识别 """
58     raw = str(self.client.gesture(self.bgr8_to_jpeg(frame)))
59     text = demjson3.decode(raw)
60     try:
```

3. Press Ctrl+S to save, then Ctrl+X to exit.

**Note:** Both files must be modified to contain the same Baidu gesture recognition APP\_ID information. Compilation is required after making the changes.