头部自由度固定

在LIFT/body/ROS/src/ARX_LIFT_ros/arx_lift_controller/src/lift_controller.cpp中

将订阅回调中，如下两行注释

> 代码块
>
> ```
> 1  control_loop.setHeadYaw(yaw);
> 2  control_loop.setHeadPitch(pitch);
> ```

```
45      ros::Subscriber sub = nh.subscribe<arm_control::PosCmd>(
46          "/ARX_VR_L", 1, [&](const arm_control::PosCmd::ConstPtr &msg) {
47          collect = true;
48          control_loop.setHeight(msg->height / 41.54);
49          control_loop.setWaistPos(msg->tempFloatData[0]);
50          double yaw, pitch;
51          double left_arm_distance_square =
52              pow(msg->x, 2) + pow(msg->y, 2) + pow(msg->z, 2);
53          double right_arm_distance_square = pow(right_arm_xyz[0], 2) +
54                                             pow(right_arm_xyz[1], 2) +
55                                             pow(right_arm_xyz[2], 2);
56          if (left_arm_distance_square < 0.01 &&
57              right_arm_distance_square < 0.01) {
58            yaw = 0;
59            pitch = 0.3;
60          } else if (left_arm_distance_square > right_arm_distance_square)
61            solveHeadPos(&yaw, &pitch, msg->x + init_pos[0] - 0.07,
62                         msg->y + init_pos[1] + 0.25,
63                         msg->z + init_pos[2] - 0.22);
64          else
65            solveHeadPos(&yaw, &pitch, right_arm_xyz[0] + init_pos[0] - 0.07,
66                         right_arm_xyz[1] + init_pos[1] - 0.25,
67                         right_arm_xyz[2] + init_pos[2] - 0.22);
68          control_loop.setHeadYaw(yaw);
69          control_loop.setHeadPitch(pitch);
70          if (type == 0)
71            control_loop.setChassisCmd(msg->chx / 2.5, -msg->chy / 2.5,
72                                       msg->chz / 2.5, msg->mode1);
73          else
74            control_loop.setChassisCmd(msg->chx / 3, -msg->chy / 3, msg->chz / 3,
75                                       msg->mode1);
76        });
```

在主函数中，调用此两个函数进行姿态设置，单位为rad

```cpp
    ros::Time last_pub = ros::Time::now();
    while (ros::ok()) {
      control_loop.loop();

      control_loop.setHeadYaw(0);
      control_loop.setHeadPitch(0.1);

      if ((ros::Time::now() - last_cb_time).toSec() >
```