

Group 3: Voice-Controlled Robot  
Assignment 4: Code Testing  
6 April 2024

### Test cases for voicerobots-server/src/decisionmaker.py

**Test Case ID: 1**

**Test Priority (Low/Medium/High):** High

**Module Name:** decisionmaker.py

**Test Designed & Executed By:** Japheth Beiler

**Test Design Date:** 4 April 2024

Step	Test Name	Class & Method	Test Data/ Parameters	Expected Result	Actual Result	Status (Pass/ Fail)	Comments
1	test_handle_stream_stop_robot	Class: DecisionMaker Method: _handle_stream	target_center: [480, 100] lidar_scan: [90, 100, 70]	control_data: [0, 0]	control_data: [0, 0]	Pass	
2	test_handle_stream_continue_moving	Class: DecisionMaker Method: _handle_stream	target_center: [480, 100] lidar_scan: [60, 80, 110]	control_data: [0, 0.4]	control_data: [0, 0.4]	Pass	
3	test_make_video_decision	Class: DecisionMaker Method: _make_video_decision	target_center: [600, 100]	video_control_ decision: [0.125, 0]	video_control_ decision: [0.125, 0]	Pass	

4	test_make_video_decision	Class: DecisionMaker Method: _make_video_decision	target_center: [300, 100]	video_control_ decision: [-0.1875, 0]	video_control_ decision: [-0.1875, 0]	Pass	
5	test_make_video_decision	Class: DecisionMaker Method: _make_video_decision	target_center: [480, 100]	video_control_ decision: [0, 0.4]	video_control_ decision: [0, 0.4]	Pass	
6	test_make_video_decision	Class: DecisionMaker Method: _make_video_decision	target_center: [0, 0]	video_control_ decision: [0, 0]	video_control_ decision: None	Fail	Returning “None” here won’t break anything, but it should probably be fixed
7	test_make_lidar_decision	Class: DecisionMaker Method: _make_lidar_decision	lidar_scan: []	stop_robot: False	stop_robot: False	Pass	
8	test_make_lidar_decision	Class: DecisionMaker Method: _make_lidar_decision	lidar_scan: [[60, 80, 110]]	stop_robot: False	stop_robot: False	Pass	
9	test_make_lidar_decision	Class: DecisionMaker Method: _make_lidar_decision	lidar_scan: [[90, 100, 70]]	stop_robot: True	stop_robot: True	Pass	

## Screenshots

test\_make\_video\_decision fails because of Step 6:

```
TESTING
Filter (e.g. text, !exclude, @tag)
3/4 4.6s
src
  decisionmaker_test.py
    DecisionMaker_Test
      test_handle_stream_stop_robot
      test_handle_stream_continue_moving
      test_make_video_decision
      test_make_lidar_decision

src > decisionmaker_test.py > DecisionMaker_Test > test_make_video_decision
7 class DecisionMaker_Test(unittest.TestCase):
39 def test_handle_stream_continue_moving(self):
60     # Check if control data is set to move forward
61     self.assertEqual(decision_maker.control_data, [0, 0.4])
62
63 def test_make_video_decision(self):
64     # Create DecisionMaker instance
65     decision_maker = DecisionMaker(None, None, None)
66
67     # Test when target center is at the right of the center
68     target_center_right = [600, 100]
```

With Step 6 commented out, all tests pass:

```
TESTING
Filter (e.g. text, !exclude, @tag)
4/4 4.6s
src
  decisionmaker_test.py
    DecisionMaker_Test
      test_handle_stream_stop_robot
      test_handle_stream_continue_moving
      test_make_video_decision
      test_make_lidar_decision

src > decisionmaker_test.py > DecisionMaker_Test > test_make_video_decision
7 class DecisionMaker_Test(unittest.TestCase):
63 def test_make_video_decision(self):
76     # Test when target center is at the center
77     target_center_center = [480, 100]
78     decision = decision_maker._make_video_decision(target_center_center)
79     self.assertEqual(decision, [0, 0.4])
80
81     '''# Test when target center is [0, 0]
82     target_center_zero = [0, 0]
83     decision = decision_maker._make_video_decision(target_center_zero)
84     self.assertEqual(decision, [0, 0])'''
85
86
87 def test_make_lidar_decision(self):
88     # Create DecisionMaker instance
```