RAPP Platform Tests - Human Detection

v0.6.0

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Chapter 1

Namespace Index

1.1 Namespace List

Here is a list of all namespaces with brief descriptions:

functional_tests 9

Chapter 2

Hierarchical Index

2.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

Test
HumanDetectionTest 11
TestCase
functional_tests.HumanDetFunc 13

Chapter 3

Class Index

3.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

HumanDetectionTest
Handles the human detection unit testing using gtests 11
functional_tests.HumanDetFunc 13

Chapter 4

File Index

4.1 File List

Here is a list of all files with brief descriptions:

/home/travis/rapp_temp/rapp-platform/rapp_human_detection/tests/human_detection/functional_tests.py 15
/home/travis/rapp_temp/rapp-platform/rapp_human_detection/tests/human_detection/unit_tests.cpp . . 15

Chapter 5

Namespace Documentation

5.1 functional_tests Namespace Reference

Classes

- class HumanDetFunc

Variables

- string PKG = 'ros_nodes'

5.1.1 Variable Documentation

5.1.1.1 string functional_tests.PKG = 'ros_nodes'

Definition at line 18 of file functional_tests.py.

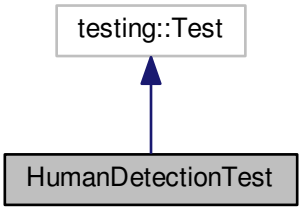
Chapter 6

Class Documentation

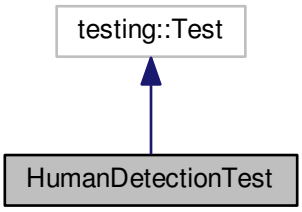
6.1 HumanDetectionTest Class Reference

Handles the human detection unit testing using gtests.

Inheritance diagram for HumanDetectionTest:



Collaboration diagram for HumanDetectionTest:



Protected Member Functions

- HumanDetectionTest ()

Default constructor.

- virtual void SetUp ()

  Sets up the class variables for each unit test call.

- virtual void TearDown ()

  This function is called after the termination of each test. Destroys the dynamically alloced variables.

Protected Attributes

- HumanDetector * human_detector_

6.1.1 Detailed Description

Handles the human detection unit testing using gtests.

Definition at line 27 of file unit_tests.cpp.

6.1.2 Constructor & Destructor Documentation

6.1.2.1 HumanDetectionTest::HumanDetectionTest ( ) [inline], [protected]

Default constructor.

Definition at line 34 of file unit_tests.cpp.

6.1.3 Member Function Documentation

6.1.3.1 virtual void HumanDetectionTest::SetUp ( ) [inline], [protected], [virtual]

Sets up the class variables for each unit test call.

Definition at line 40 of file unit_tests.cpp.

6.1.3.2 virtual void HumanDetectionTest::TearDown ( ) [inline], [protected], [virtual]

This function is called after the termination of each test. Destroys the dynamically alloced variables.

Definition at line 48 of file unit_tests.cpp.

6.1.4 Member Data Documentation

6.1.4.1 HumanDetector* HumanDetectionTest::human_detector_ [protected]

Pointer of type HumanDetector. Used to check its functions

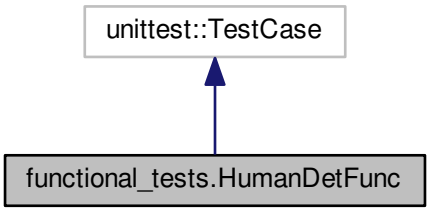
Definition at line 53 of file unit_tests.cpp.

The documentation for this class was generated from the following file:

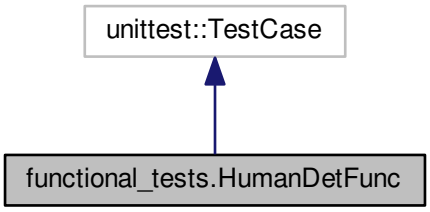
- /home/travis/rapp_temp/rapp-platform/rapp_human_detection/tests/human_detection/unit_tests.cpp

6.2 functional_tests.HumanDetFunc Class Reference

Inheritance diagram for functional_tests.HumanDetFunc:



Collaboration diagram for functional_tests.HumanDetFunc:



Public Member Functions

- def test_fileDoesNotExist

  Tests human detection with a non existent image.
- def test_fileExistsButItAudio

  Tests human detection with an audio file.
- def test_humanDoesNotExist

  Tests human detection with an image that does not contain humans.
- def test_humanExists_realistic

  Tests human detection with a NAO captured image.
- def test_humanExists_stress

  Tests human detection with a NAO captured image from almost 2 meters.

6.2.1 Detailed Description

```
Handles the human detection functional tests
```

Definition at line 32 of file functional_tests.py.

6.2.2 Member Function Documentation

6.2.2.1 def functional_tests.HumanDetFunc.test_fileDoesNotExist (*self*)

Tests human detection with a non existent image.

Should return 0 humans

Definition at line 91 of file functional_tests.py.

6.2.2.2 def functional_tests.HumanDetFunc.test_fileExistsButItAudio (*self*)

Tests human detection with an audio file.

Should not crush an return 0 humans

Definition at line 104 of file functional_tests.py.

6.2.2.3 def functional_tests.HumanDetFunc.test_humanDoesNotExist (*self*)

Tests human detection with an image that does not contain humans.

Should return 0 humans

Definition at line 78 of file functional_tests.py.

6.2.2.4 def functional_tests.HumanDetFunc.test_humanExists_realistic (*self*)

Tests human detection with a NAO captured image.

Should return 1 human

Definition at line 37 of file functional_tests.py.

6.2.2.5 def functional_tests.HumanDetFunc.test_humanExists_stress (*self*)

Tests human detection with a NAO captured image from almost 2 meters.

Should return 1 human DISABLED - Returned 2 def test_humanExists_realistic_2(self): rospack = rospkg.-RosPack() human_service = rospy.get_param("rapp_human_detection_detect_humans_topic") rospy.wait_for_-service(human_service) fd_service = rospy.ServiceProxy(human_service, HumanDetectionRosSrv) req = Human-DetectionRosSrvRequest() req.imageFilename = rospack.get_path('rapp_testing_tools') + \ '/test_data/human_-detection_samples/NAO_picture_10.png' response = fd_service(req) humans_num = len(response.humans_up_-left) self.assertEqual(humans_num, 1) Stress test for human detection. 20 calls in a row

Definition at line 64 of file functional_tests.py.

The documentation for this class was generated from the following file:

- /home/travis/rapp_temp/rapp-platform/rapp_human_detection/tests/human_detection/functional_tests.py

Chapter 7

File Documentation

7.1 /home/travis/rapp_temp/rapp-platform/rapp_human_detection/tests/human_detection/functional-_tests.py File Reference

Classes

- class functional_tests.HumanDetFunc

Namespaces

- functional_tests

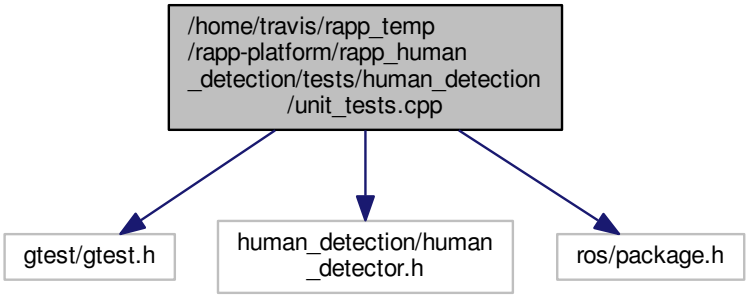
Variables

- string functional_tests.PKG = 'ros_nodes'

7.2 /home/travis/rapp_temp/rapp-platform/rapp_human_detection/tests/human_detection/unit-_tests.cpp File Reference

```
#include <gtest/gtest.h>
#include <human_detection/human_detector.h>
#include <ros/package.h>
```

Include dependency graph for unit_tests.cpp:



Classes

- class HumanDetectionTest

  Handles the human detection unit testing using gtests.

Functions

- int main (int argc, char **argv)

  The main function. Initialized the unit tests.
- TEST_F (HumanDetectionTest, human_test)

  Tests human detection with the Lenna image. Should be successful.
- TEST_F (HumanDetectionTest, qr_test)

  Tests human detection with a qr code. Should return 0 humans.
- TEST_F (HumanDetectionTest, file_not_exists_test)

  Tests human detection with a missing file. Should return 0 humans.
- TEST_F (HumanDetectionTest, zero_sized_image_test)

  Tests human detection with an empty image. Should return 0 humans.

7.2.1 Function Documentation

7.2.1.1 int main (int *argc*, char ** *argv*)

The main function. Initialized the unit tests.

Definition at line 103 of file unit_tests.cpp.

7.2.1.2 TEST_F (HumanDetectionTest , human_test)

Tests human detection with the Lenna image. Should be successful.

Definition at line 60 of file unit_tests.cpp.

7.2.1.3 TEST_F (HumanDetectionTest , qr_test)

Tests human detection with a qr code. Should return 0 humans.

Definition at line 71 of file unit_tests.cpp.

7.2.1.4 TEST_F (HumanDetectionTest , file_not_exists_test)

Tests human detection with a missing file. Should return 0 humans.

Definition at line 82 of file unit_tests.cpp.

7.2.1.5 TEST_F (HumanDetectionTest , zero_sized_image_test)

Tests human detection with an empty image. Should return 0 humans.

Definition at line 93 of file unit_tests.cpp.

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