RAPP Platform Tests - Face 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
FaceDetectionTest 11
TestCase
functional_tests.FaceDetFunc 13

Chapter 3

Class Index

3.1 Class List

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

FaceDetectionTest
Handles the face detection unit testing using gtests 11
functional_tests.FaceDetFunc 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_face_detection/tests/face_detection/functional_tests.py . . . 17
/home/travis/rapp_temp/rapp-platform/rapp_face_detection/tests/face_detection/unit_tests.cpp 17

Chapter 5

Namespace Documentation

5.1 functional_tests Namespace Reference

Classes

- class FaceDetFunc

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.

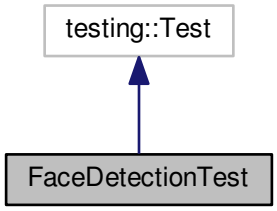
Chapter 6

Class Documentation

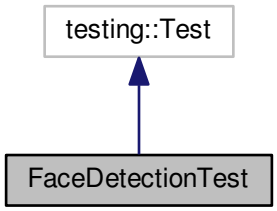
6.1 FaceDetectionTest Class Reference

Handles the face detection unit testing using gtests.

Inheritance diagram for FaceDetectionTest:



Collaboration diagram for FaceDetectionTest:



Protected Member Functions

- FaceDetectionTest ()

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

- FaceDetector * face_detector_

6.1.1 Detailed Description

Handles the face detection unit testing using gtests.

Definition at line 27 of file unit_tests.cpp.

6.1.2 Constructor & Destructor Documentation

6.1.2.1 FaceDetectionTest::FaceDetectionTest ( ) [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 FaceDetectionTest::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 FaceDetectionTest::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 FaceDetector* FaceDetectionTest::face_detector_ [protected]

Pointer of type FaceDetector. Used to check its functions

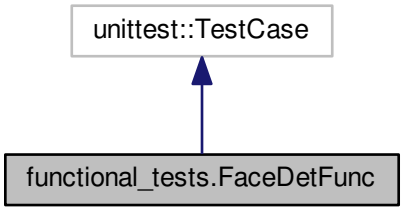
Definition at line 53 of file unit_tests.cpp.

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

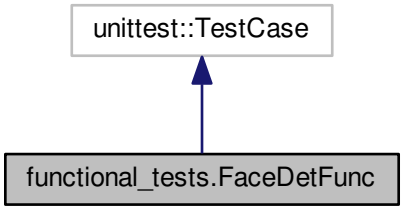
- /home/travis/rapp_temp/rapp-platform/rapp_face_detection/tests/face_detection/unit_tests.cpp

6.2 functional_tests.FaceDetFunc Class Reference

Inheritance diagram for functional_tests.FaceDetFunc:



Collaboration diagram for functional_tests.FaceDetFunc:



Public Member Functions

- def test_faceDoesNotExist
  Tests face detection with an image that does not contain faces.
- def test_faceExists
  Tests face detection with Lenna image.
- def test_faceExists_realistic
  Tests face detection with realistic images.
- def test_faceExists_realistic_2
  Tests face detection with a NAO captured image.
- def test_faceExists_realistic_2
  Tests face detection with a NAO captured image from almost 2 meters.
- def test_faceExists_realistic_fast
  Tests face detection with realistic images.
- def test_faceExists_stress
  Stress test for face detection.
- def test_fileDoesNotExist
  Tests face detection with a non existent image.
- def test_fileExistsButItAudio
  Tests face detection with an audio file.

6.2.1 Detailed Description

```
Handles the face 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.FaceDetFunc.test_faceDoesNotExist (*self*)

Tests face detection with an image that does not contain faces.

Should return 0 faces

Definition at line 117 of file functional_tests.py.

6.2.2.2 def functional_tests.FaceDetFunc.test_faceExists (*self*)

Tests face detection with Lenna image.

Should return 1 face

Definition at line 37 of file functional_tests.py.

6.2.2.3 def functional_tests.FaceDetFunc.test_faceExists_realistic (*self*)

Tests face detection with realistic images.

Should return 1 face

Definition at line 50 of file functional_tests.py.

6.2.2.4 def functional_tests.FaceDetFunc.test_faceExists_realistic_2 (*self*)

Tests face detection with a NAO captured image.

Should return 1 face

Definition at line 77 of file functional_tests.py.

6.2.2.5 def functional_tests.FaceDetFunc.test_faceExists_realistic_2 (*self*)

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

Should return 1 face

Definition at line 90 of file functional_tests.py.

6.2.2.6 def functional_tests.FaceDetFunc.test_faceExists_realistic_fast (*self*)

Tests face detection with realistic images.

Should return 1 face

Definition at line 63 of file functional_tests.py.

6.2.2.7 def functional_tests.FaceDetFunc.test_faceExists_stress (*self*)

Stress test for face detection.

20 calls in a row

Definition at line 103 of file functional_tests.py.

6.2.2.8 def functional_tests.FaceDetFunc.test_fileDoesNotExist (*self*)

Tests face detection with a non existent image.

Should return 0 faces

Definition at line 130 of file functional_tests.py.

6.2.2.9 def functional_tests.FaceDetFunc.test_fileExistsButItAudio (*self*)

Tests face detection with an audio file.

Should not crush an return 0 faces

Definition at line 143 of file functional_tests.py.

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

- /home/travis/rapp_temp/rapp-platform/rapp_face_detection/tests/face_detection/functional_tests.py

Chapter 7

File Documentation

7.1 /home/travis/rapp_temp/rapp-platform/rapp_face_detection/tests/face_detection/functional-_tests.py File Reference

Classes

- class functional_tests.FaceDetFunc

Namespaces

- functional_tests

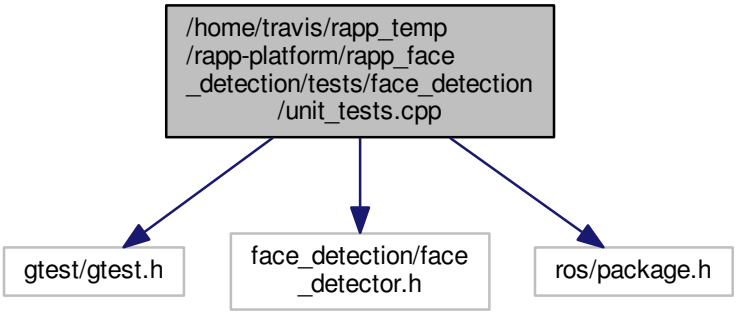
Variables

- string functional_tests.PKG = 'ros_nodes'

7.2 /home/travis/rapp_temp/rapp-platform/rapp_face_detection/tests/face_detection/unit-_tests.cpp File Reference

```
#include <gtest/gtest.h>
#include <face_detection/face_detector.h>
#include <ros/package.h>
```

Include dependency graph for unit_tests.cpp:



Classes

- class FaceDetectionTest

  Handles the face detection unit testing using gtests.

Functions

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

  The main function. Initialized the unit tests.
- TEST_F (FaceDetectionTest, lenna_test)

  Tests face detection with the Lenna image. Should be successful.
- TEST_F (FaceDetectionTest, klpanagi_close_straight_test)

  Tests face detection with a NAO captured image image. Should be successful.
- TEST_F (FaceDetectionTest, klpanagi_close_straight_fast_test)

  Tests face detection with a NAO captured image image. Should be successful.
- TEST_F (FaceDetectionTest, qr_test)

  Tests face detection with a qr code. Should return 0 faces.
- TEST_F (FaceDetectionTest, file_not_exists_test)

  Tests face detection with a missing file. Should return 0 faces.
- TEST_F (FaceDetectionTest, zero_sized_image_test)

  Tests face detection with an empty image. Should return 0 faces.

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 126 of file unit_tests.cpp.

7.2.1.2 TEST_F (FaceDetectionTest , lenna_test)

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

Definition at line 60 of file unit_tests.cpp.

7.2.1.3 TEST_F (FaceDetectionTest , klpanagi_close_straight_test)

Tests face detection with a NAO captured image image. Should be successful.

Definition at line 71 of file unit_tests.cpp.

7.2.1.4 TEST_F (FaceDetectionTest , klpanagi_close_straight_fast_test)

Tests face detection with a NAO captured image image. Should be successful.

Definition at line 82 of file unit_tests.cpp.

7.2.1.5 TEST_F (FaceDetectionTest , qr_test)

Tests face detection with a qr code. Should return 0 faces.

Definition at line 94 of file unit_tests.cpp.

7.2.1.6 TEST_F (FaceDetectionTest , file_not_exists_test)

Tests face detection with a missing file. Should return 0 faces.

Definition at line 105 of file unit_tests.cpp.

7.2.1.7 TEST_F (FaceDetectionTest , zero_sized_image_test)

Tests face detection with an empty image. Should return 0 faces.

Definition at line 116 of file unit_tests.cpp.

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