

RAPP Platform Tests - Face Detection

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Contents

1	Namespace Index	1
1.1	Namespace List	1
2	Hierarchical Index	3
2.1	Class Hierarchy	3
3	Class Index	5
3.1	Class List	5
4	File Index	7
4.1	File List	7
5	Namespace Documentation	9
5.1	functional_tests Namespace Reference	9
5.1.1	Variable Documentation	9
5.1.1.1	PKG	9
6	Class Documentation	11
6.1	FaceDetectionTest Class Reference	11
6.1.1	Detailed Description	12
6.1.2	Constructor & Destructor Documentation	12
6.1.2.1	FaceDetectionTest	12
6.1.3	Member Function Documentation	12
6.1.3.1	SetUp	12
6.1.3.2	TearDown	12
6.1.4	Member Data Documentation	12
6.1.4.1	face_detector_	12
6.2	functional_tests.FaceDetFunc Class Reference	13
6.2.1	Detailed Description	14
6.2.2	Member Function Documentation	14
6.2.2.1	test_faceDoesNotExist	14
6.2.2.2	test_faceExists	14
6.2.2.3	test_faceExists_realistic	14

6.2.2.4	test_faceExists_realistic_2	14
6.2.2.5	test_faceExists_realistic_2	14
6.2.2.6	test_faceExists_realistic_fast	14
6.2.2.7	test_faceExists_stress	14
6.2.2.8	test_fileDoesNotExist	15
6.2.2.9	test_fileExistsButItAudio	15
7	File Documentation	17
7.1	/home/travis/rapp_temp/rapp-platform/rapp_face_detection/tests/face_detection/functional_tests.py File Reference	17
7.2	/home/travis/rapp_temp/rapp-platform/rapp_face_detection/tests/face_detection/unit_tests.cpp File Reference	17
7.2.1	Function Documentation	18
7.2.1.1	main	18
7.2.1.2	TEST_F	18
7.2.1.3	TEST_F	19
7.2.1.4	TEST_F	19
7.2.1.5	TEST_F	19
7.2.1.6	TEST_F	19
7.2.1.7	TEST_F	19
Index		20

Chapter 1

Namespace Index

1.1 Namespace List

Here is a list of all namespaces with brief descriptions:

functional_tests	9
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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.

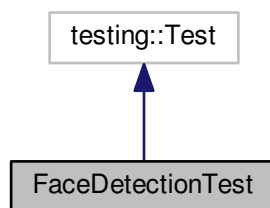
Chapter 6

Class Documentation

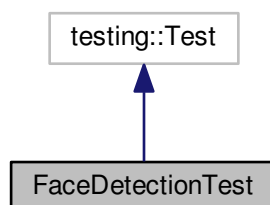
6.1 FaceDetectionTest Class Reference

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 allocated 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 allocated 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

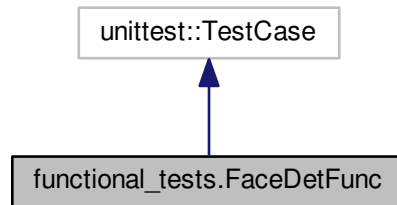
Definition at line 53 of file unit_tests.cpp.

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

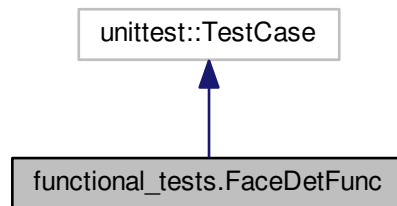
- /home/travis/rapp_temp/rapp-platform/rapp_face_detection/tests/face_detection/[unit_tests.cpp](#)

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`

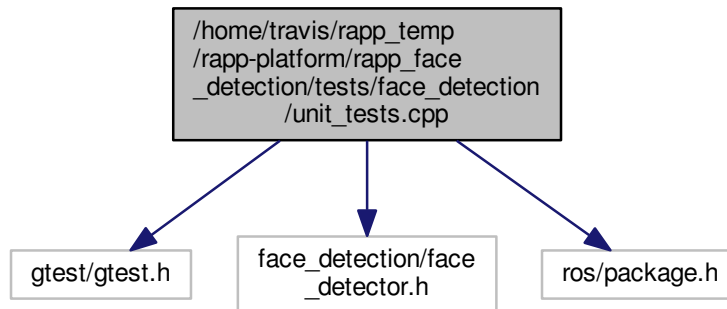
Variables

- 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.

Index

- /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](#)
- face_detector_
 - FaceDetectionTest, [12](#)
- FaceDetectionTest, [11](#)
 - face_detector_, [12](#)
 - FaceDetectionTest, [12](#)
 - FaceDetectionTest, [12](#)
 - SetUp, [12](#)
 - TearDown, [12](#)
- functional_tests, [9](#)
 - PKG, [9](#)
- functional_tests.FaceDetFunc, [13](#)
- functional_tests::FaceDetFunc
 - test_faceDoesNotExist, [14](#)
 - test_faceExists, [14](#)
 - test_faceExists_realistic, [14](#)
 - test_faceExists_realistic_2, [14](#)
 - test_faceExists_realistic_fast, [14](#)
 - test_faceExists_stress, [14](#)
 - test_fileDoesNotExist, [15](#)
 - test_fileExistsButItAudio, [15](#)
- main
 - unit_tests.cpp, [18](#)
- PKG
 - functional_tests, [9](#)
- SetUp
 - FaceDetectionTest, [12](#)
- TEST_F
 - unit_tests.cpp, [18](#), [19](#)
- TearDown
 - FaceDetectionTest, [12](#)
- test_faceDoesNotExist
 - functional_tests::FaceDetFunc, [14](#)
- test_faceExists
 - functional_tests::FaceDetFunc, [14](#)
- test_faceExists_realistic
 - functional_tests::FaceDetFunc, [14](#)
- test_faceExists_realistic_2
 - functional_tests::FaceDetFunc, [14](#)
- test_faceExists_realistic_fast
 - functional_tests::FaceDetFunc, [14](#)
- test_faceExists_stress
 - functional_tests::FaceDetFunc, [14](#)
- test_fileDoesNotExist
 - functional_tests::FaceDetFunc, [15](#)
- test_fileExistsButItAudio
 - functional_tests::FaceDetFunc, [15](#)
- unit_tests.cpp
 - main, [18](#)
 - TEST_F, [18](#), [19](#)