

# RAPP Platform Tests - Face Detection

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# Chapter 1

## Namespace Index

### 1.1 Namespace List

Here is a list of all namespaces with brief descriptions:

<a href="#">functional_tests</a> . . . . .	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 . . . . .	<a href="#">11</a>
TestCase	
functional_tests.FaceDetFunc . . . . .	<a href="#">13</a>





## Chapter 3

# Class Index

### 3.1 Class List

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

<a href="#">FaceDetectionTest</a>	
Handles the face detection unit testing using gtests	11
<a href="#">functional_tests.FaceDetFunc</a>	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/ <a href="#">functional_tests.py</a>	. . .	17
/home/travis/rapp_temp/rapp-platform/rapp_face_detection/tests/face_detection/ <a href="#">unit_tests.cpp</a>	. . . .	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.



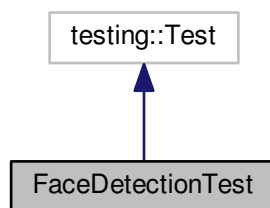
## Chapter 6

# Class Documentation

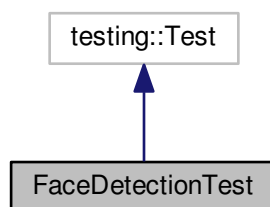
### 6.1 FaceDetectionTest Class Reference

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.

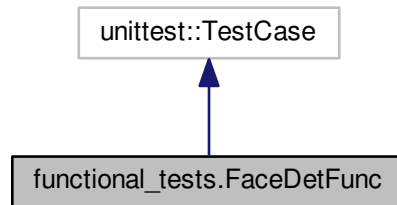
The documentation for this class was generated from the following file:

- /home/travis/rapp\_temp/rapp-platform/rapp\_face\_detection/tests/face\_detection/[unit\\_tests.cpp](#)

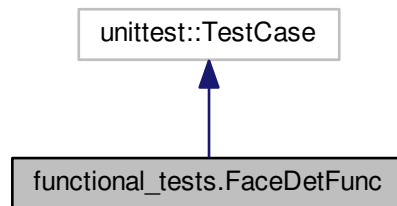


## 6.2 functional\_tests.FaceDetFunc Class Reference

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`

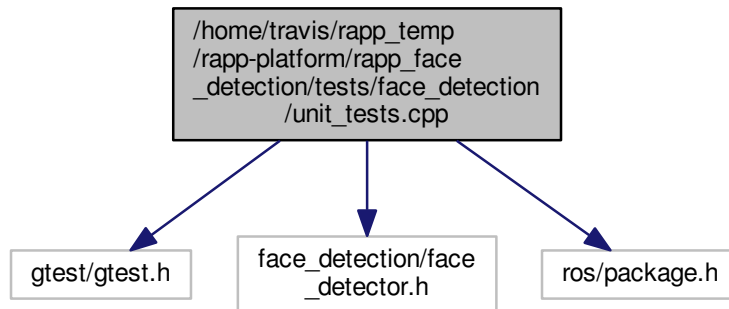
#### Variables

- 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.

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