

# RAPP Platform Tests - Face Detection

## 0.5.5

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# Contents

<b>1</b>	<b>Namespace Index</b>	<b>1</b>
1.1	Namespace List . . . . .	1
<b>2</b>	<b>Hierarchical Index</b>	<b>3</b>
2.1	Class Hierarchy . . . . .	3
<b>3</b>	<b>Class Index</b>	<b>5</b>
3.1	Class List . . . . .	5
<b>4</b>	<b>File Index</b>	<b>7</b>
4.1	File List . . . . .	7
<b>5</b>	<b>Namespace Documentation</b>	<b>9</b>
5.1	functional_tests Namespace Reference . . . . .	9
5.1.1	Variable Documentation . . . . .	9
5.1.1.1	PKG . . . . .	9
<b>6</b>	<b>Class Documentation</b>	<b>11</b>
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	<a href="#">test_faceExists_realistic_2</a>	14
6.2.2.5	<a href="#">test_faceExists_stress</a>	14
6.2.2.6	<a href="#">test_fileDoesNotExist</a>	14
6.2.2.7	<a href="#">test_fileExistsButItAudio</a>	14
<b>7</b>	<b>File Documentation</b>	<b>17</b>
7.1	<a href="#">/home/travis/rapp_temp/rapp-platform/rapp_face_detection/tests/face_detection/functional_tests.py</a> File Reference	17
7.2	<a href="#">/home/travis/rapp_temp/rapp-platform/rapp_face_detection/tests/face_detection/unit_tests.cpp</a> 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
	<b>Index</b>	<b>20</b>

# 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.



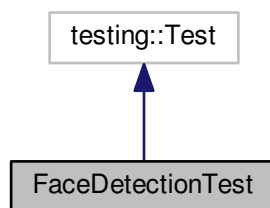
## Chapter 6

# Class Documentation

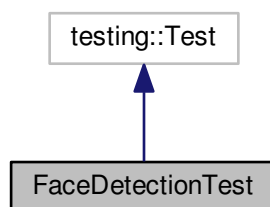
### 6.1 FaceDetectionTest Class Reference

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.

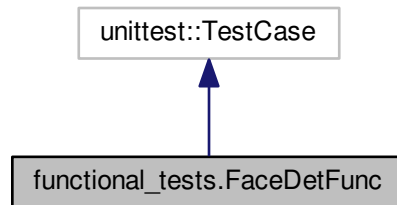
The documentation for this class was generated from the following file:

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

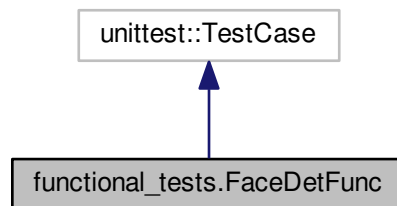


## 6.2 functional\_tests.FaceDetFunc Class Reference

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 a NAO captured image.*
- def [test\\_faceExists\\_realistic\\_2](#)  
*Tests face detection with a NAO captured image from almost 2 meters.*
- 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 90 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 a NAO captured image.

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 from almost 2 meters.

Should return 1 face

Definition at line 63 of file functional\_tests.py.

#### 6.2.2.5 `def functional_tests.FaceDetFunc.test_faceExists_stress ( self )`

Stress test for face detection.

20 calls in a row

Definition at line 76 of file functional\_tests.py.

#### 6.2.2.6 `def functional_tests.FaceDetFunc.test_fileDoesNotExist ( self )`

Tests face detection with a non existent image.

Should return 0 faces

Definition at line 103 of file functional\_tests.py.

#### 6.2.2.7 `def functional_tests.FaceDetFunc.test_fileExistsButItAudio ( self )`

Tests face detection with an audio file.

Should not crush an return 0 faces

Definition at line 116 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](/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`

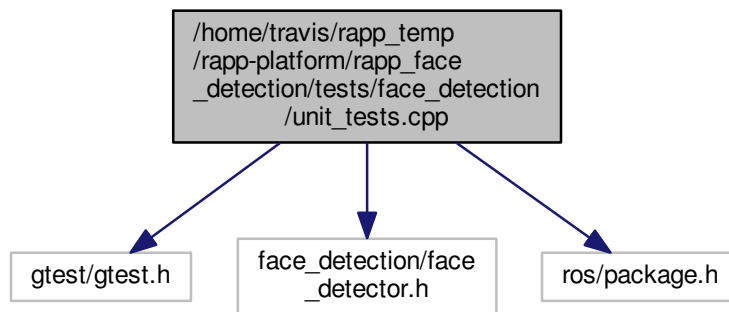
#### Variables

- 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](#), 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 103 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 , qr\_test )

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

Definition at line 71 of file unit\_tests.cpp.

#### 7.2.1.4 TEST\_F( FaceDetectionTest , file\_not\_exists\_test )

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

Definition at line 82 of file unit\_tests.cpp.

#### 7.2.1.5 TEST\_F( FaceDetectionTest , zero\_sized\_image\_test )

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

Definition at line 93 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\\_stress](#), [14](#)
  - [test\\_fileDoesNotExist](#), [14](#)
  - [test\\_fileExistsButItAudio](#), [14](#)
- [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\\_stress](#)
  - [functional\\_tests::FaceDetFunc](#), [14](#)
- [test\\_fileDoesNotExist](#)
  - [functional\\_tests::FaceDetFunc](#), [14](#)
- [test\\_fileExistsButItAudio](#)
  - [functional\\_tests::FaceDetFunc](#), [14](#)
- [unit\\_tests.cpp](#)
  - [main](#), [18](#)
  - [TEST\\_F](#), [18](#), [19](#)