

RAPP Platform Tests - Human Detection  
v0.5.5

Generated by Doxygen 1.8.6

Fri Jul 1 2016 18:19:20



# 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	HumanDetectionTest Class Reference . . . . .	11
6.1.1	Detailed Description . . . . .	12
6.1.2	Constructor & Destructor Documentation . . . . .	12
6.1.2.1	HumanDetectionTest . . . . .	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	human_detector_ . . . . .	12
6.2	functional_tests.HumanDetFunc Class Reference . . . . .	13
6.2.1	Detailed Description . . . . .	13
6.2.2	Member Function Documentation . . . . .	14
6.2.2.1	test_fileDoesNotExist . . . . .	14
6.2.2.2	test_fileExistsButItAudio . . . . .	14
6.2.2.3	test_humanDoesNotExist . . . . .	14

---

6.2.2.4	<a href="#">test_humanExists_realistic</a> . . . . .	14
6.2.2.5	<a href="#">test_humanExists_stress</a> . . . . .	14
<b>7</b>	<b>File Documentation</b>	<b>15</b>
7.1	<a href="#">/home/travis/rapp_temp/rapp-platform/rapp_human_detection/tests/human_detection/functional_ - tests.py File Reference</a> . . . . .	15
7.2	<a href="#">/home/travis/rapp_temp/rapp-platform/rapp_human_detection/tests/human_detection/unit_tests.cpp File Reference</a> . . . . .	15
7.2.1	Function Documentation . . . . .	16
7.2.1.1	main . . . . .	16
7.2.1.2	TEST_F . . . . .	16
7.2.1.3	TEST_F . . . . .	17
7.2.1.4	TEST_F . . . . .	17
7.2.1.5	TEST_F . . . . .	17
	<b>Index</b>	<b>18</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
--	---



## 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:

<a href="#">HumanDetectionTest</a>	
Handles the human detection unit testing using gtests . . . . .	<a href="#">11</a>
<a href="#">functional_tests.HumanDetFunc</a> . . . . .	<a href="#">13</a>



## Chapter 4

# File Index

### 4.1 File List

Here is a list of all files with brief descriptions:

<code>/home/travis/rapp_temp/rapp-platform/rapp_human_detection/tests/human_detection/functional_tests.py</code>	<a href="#">15</a>
<code>/home/travis/rapp_temp/rapp-platform/rapp_human_detection/tests/human_detection/unit_tests.cpp</code>	<a href="#">15</a>



## 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.



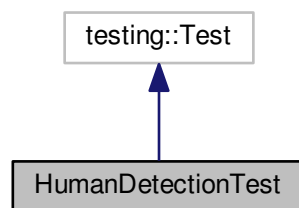
## Chapter 6

# Class Documentation

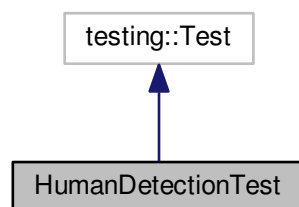
### 6.1 HumanDetectionTest Class Reference

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 allocated 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 allocated 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.

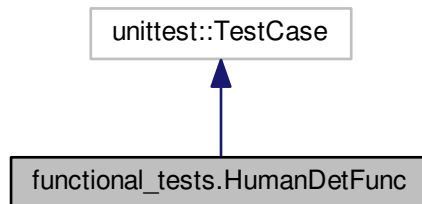
The documentation for this class was generated from the following file:

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

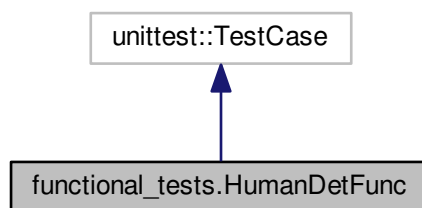


## 6.2 functional\_tests.HumanDetFunc Class Reference

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 crash and 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 = HumanDetectionRosSrvRequest()`  
`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](/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](#)

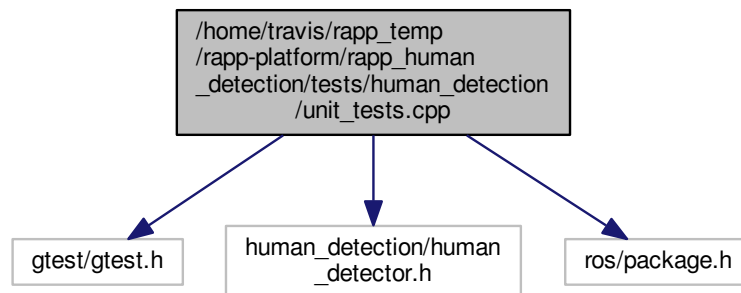
#### Variables

- 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.

# Index

/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](#)

functional\_tests, [9](#)  
    PKG, [9](#)

functional\_tests.HumanDetFunc, [13](#)

functional\_tests::HumanDetFunc  
    test\_fileDoesNotExist, [14](#)  
    test\_fileExistsButItAudio, [14](#)  
    test\_humanDoesNotExist, [14](#)  
    test\_humanExists\_realistic, [14](#)  
    test\_humanExists\_stress, [14](#)

human\_detector\_  
    HumanDetectionTest, [12](#)

HumanDetectionTest, [11](#)  
    human\_detector\_, [12](#)  
    HumanDetectionTest, [12](#)  
    HumanDetectionTest, [12](#)  
    SetUp, [12](#)  
    TearDown, [12](#)

main  
    unit\_tests.cpp, [16](#)

PKG  
    functional\_tests, [9](#)

SetUp  
    HumanDetectionTest, [12](#)

TEST\_F  
    unit\_tests.cpp, [16](#), [17](#)

TearDown  
    HumanDetectionTest, [12](#)

test\_fileDoesNotExist  
    functional\_tests::HumanDetFunc, [14](#)

test\_fileExistsButItAudio  
    functional\_tests::HumanDetFunc, [14](#)

test\_humanDoesNotExist  
    functional\_tests::HumanDetFunc, [14](#)

test\_humanExists\_realistic  
    functional\_tests::HumanDetFunc, [14](#)

test\_humanExists\_stress  
    functional\_tests::HumanDetFunc, [14](#)

unit\_tests.cpp

main, [16](#)  
TEST\_F, [16](#), [17](#)