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# **Douglas-Quaid**

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## CONTENTS:

<b>1</b>	<b>carlhauser_client package</b>	<b>1</b>
1.1	Subpackages	2
1.1.1	carlhauser_client.API package	2
1.1.1.1	Submodules	2
1.1.1.2	carlhauser_client.API.cli module	2
1.1.1.3	carlhauser_client.API.extended_api module	2
1.1.1.4	carlhauser_client.API.simple_api module	2
1.1.1.5	Module contents	2
1.1.2	carlhauser_client.EvaluationTools package	2
1.1.2.1	Subpackages	2
1.1.2.1.1	carlhauser_client.EvaluationTools.SimilarityGraphExtractor package	2
1.1.2.1.1.1	Submodules	2
1.1.2.1.1.2	carlhauser_client.EvaluationTools.SimilarityGraphExtractor.similarity_graph_extractor module	2
1.1.2.1.1.3	carlhauser_client.EvaluationTools.SimilarityGraphExtractor.similarity_graph_quality_evaluator module	2
1.1.2.1.1.4	Module contents	2
1.1.2.1.2	carlhauser_client.EvaluationTools.StorageGraphExtractor package	2
1.1.2.1.2.1	Submodules	2
1.1.2.1.2.2	carlhauser_client.EvaluationTools.StorageGraphExtractor.cluster_matching_quality_evaluator module	2
1.1.2.1.2.3	carlhauser_client.EvaluationTools.StorageGraphExtractor.storage_quality_evaluator module	2
1.1.2.1.2.4	Module contents	2
1.1.2.2	Module contents	2
1.1.3	carlhauser_client.Helpers package	2
1.1.3.1	Submodules	2
1.1.3.2	carlhauser_client.Helpers.dict_utilities module	2
1.1.3.3	Module contents	2
1.2	Submodules	2
1.3	carlhauser_client.client_instance_example module	2
1.4	Module contents	2
<b>2</b>	<b>carlhauser_client_tests package</b>	<b>3</b>
2.1	Subpackages	3
2.1.1	carlhauser_client_tests.API package	3
2.1.1.1	Submodules	3
2.1.1.2	carlhauser_client_tests.API.test_API_cli module	3
2.1.1.3	carlhauser_client_tests.API.test_API_extended_api module	3
2.1.1.4	carlhauser_client_tests.API.test_API_simple_api module	3

2.1.1.5	Module contents . . . . .	3
2.1.2	carlhauser_client_tests.EvaluationTools package . . . . .	3
2.1.2.1	Subpackages . . . . .	3
2.1.2.1.1	carlhauser_client_tests.EvaluationTools.evaluator package . . . . .	3
2.1.2.1.1.1	Submodules . . . . .	3
2.1.2.1.1.2	carlhauser_client_tests.EvaluationTools.evaluator.test_cluster_matching_quality_evaluator module . . . . .	3
2.1.2.1.1.3	carlhauser_client_tests.EvaluationTools.evaluator.test_similarity_graph_extractor module . . . . .	3
2.1.2.1.1.4	carlhauser_client_tests.EvaluationTools.evaluator.test_similarity_graph_quality_evaluator module . . . . .	4
2.1.2.1.1.5	carlhauser_client_tests.EvaluationTools.evaluator.test_storage_quality_evaluator module . . . . .	4
2.1.2.1.1.6	Module contents . . . . .	4
2.1.2.2	Module contents . . . . .	4
2.1.3	carlhauser_client_tests.Helpers package . . . . .	4
2.1.3.1	Submodules . . . . .	4
2.1.3.2	carlhauser_client_tests.Helpers.test_dict_utilities module . . . . .	4
2.1.3.3	Module contents . . . . .	4
2.2	Submodules . . . . .	4
2.3	carlhauser_client_tests.context module . . . . .	4
2.4	Module contents . . . . .	4
<b>3</b>	<b>carlhauser_server package</b>	<b>5</b>
3.1	Subpackages . . . . .	6
3.1.1	carlhauser_server.API package . . . . .	6
3.1.1.1	Submodules . . . . .	6
3.1.1.2	carlhauser_server.API.API_server module . . . . .	6
3.1.1.3	carlhauser_server.API.in_memory_files_ops module . . . . .	6
3.1.1.4	Module contents . . . . .	6
3.1.2	carlhauser_server.Configuration package . . . . .	6
3.1.2.1	Submodules . . . . .	6
3.1.2.2	carlhauser_server.Configuration.algo_conf module . . . . .	6
3.1.2.3	carlhauser_server.Configuration.database_conf module . . . . .	6
3.1.2.4	carlhauser_server.Configuration.distance_engine_conf module . . . . .	6
3.1.2.5	carlhauser_server.Configuration.feature_extractor_conf module . . . . .	6
3.1.2.6	carlhauser_server.Configuration.webservice_conf module . . . . .	6
3.1.2.7	Module contents . . . . .	6
3.1.3	carlhauser_server.DatabaseAccessor package . . . . .	6
3.1.3.1	Submodules . . . . .	6
3.1.3.2	carlhauser_server.DatabaseAccessor.database_adder module . . . . .	6
3.1.3.3	carlhauser_server.DatabaseAccessor.database_common module . . . . .	6
3.1.3.4	carlhauser_server.DatabaseAccessor.database_requester module . . . . .	6
3.1.3.5	carlhauser_server.DatabaseAccessor.database_utilities module . . . . .	6
3.1.3.6	carlhauser_server.DatabaseAccessor.database_worker module . . . . .	6
3.1.3.7	Module contents . . . . .	6
3.1.4	carlhauser_server.DistanceEngine package . . . . .	6
3.1.4.1	Submodules . . . . .	6
3.1.4.2	carlhauser_server.DistanceEngine.distance_engine module . . . . .	6
3.1.4.3	carlhauser_server.DistanceEngine.distance_hash module . . . . .	6
3.1.4.4	carlhauser_server.DistanceEngine.distance_orb module . . . . .	6
3.1.4.5	carlhauser_server.DistanceEngine.merging_engine module . . . . .	6
3.1.4.6	carlhauser_server.DistanceEngine.scoring_datastructures module . . . . .	6
3.1.4.7	Module contents . . . . .	6

3.1.5	carlhauser_server.FeatureExtractor package	6
3.1.5.1	Submodules	6
3.1.5.2	carlhauser_server.FeatureExtractor.feature_worker module	6
3.1.5.3	carlhauser_server.FeatureExtractor.picture_hasher module	6
3.1.5.4	carlhauser_server.FeatureExtractor.picture_orber module	6
3.1.5.5	Module contents	6
3.1.6	carlhauser_server.Helpers package	6
3.1.6.1	Submodules	6
3.1.6.2	carlhauser_server.Helpers.arg_parser module	6
3.1.6.3	carlhauser_server.Helpers.socket module	6
3.1.6.4	Module contents	6
3.1.7	carlhauser_server.Processus package	6
3.1.7.1	Submodules	6
3.1.7.2	carlhauser_server.Processus.processus_list module	6
3.1.7.3	carlhauser_server.Processus.worker_process module	7
3.1.7.4	Module contents	8
3.1.8	carlhauser_server.Singletons package	8
3.1.8.1	Submodules	8
3.1.8.2	carlhauser_server.Singletons.database_start_stop module	8
3.1.8.3	carlhauser_server.Singletons.singleton module	8
3.1.8.4	carlhauser_server.Singletons.worker_start_stop module	8
3.1.8.5	Module contents	8
3.2	Submodules	8
3.3	carlhauser_server.instance_handler module	8
3.4	Module contents	8
<b>4</b>	<b>carlhauser_server_tests package</b>	<b>9</b>
4.1	Subpackages	9
4.1.1	carlhauser_server_tests.API package	9
4.1.1.1	Submodules	9
4.1.1.2	carlhauser_server_tests.API.test_in_memory_files_ops module	9
4.1.1.3	Module contents	11
4.1.2	carlhauser_server_tests.Configuration package	11
4.1.2.1	Submodules	11
4.1.2.2	carlhauser_server_tests.Configuration.test_feature_extractor_conf module	11
4.1.2.3	Module contents	11
4.1.3	carlhauser_server_tests.Data package	11
4.1.3.1	Module contents	11
4.1.4	carlhauser_server_tests.DatabaseAccessor package	11
4.1.4.1	Submodules	11
4.1.4.2	carlhauser_server_tests.DatabaseAccessor.test_db_adder module	11
4.1.4.3	Module contents	11
4.1.5	carlhauser_server_tests.DistanceEngine package	11
4.1.5.1	Submodules	11
4.1.5.2	carlhauser_server_tests.DistanceEngine.test_distance_engine module	11
4.1.5.3	carlhauser_server_tests.DistanceEngine.test_merging_engine module	11
4.1.5.4	Module contents	11
4.1.6	carlhauser_server_tests.FeatureExtractor package	11
4.1.6.1	Module contents	11
4.1.7	carlhauser_server_tests.Helpers package	11
4.1.7.1	Module contents	11
4.1.8	carlhauser_server_tests.Processus package	11
4.1.8.1	Module contents	11
4.1.9	carlhauser_server_tests.Singletons package	11

4.1.9.1	Submodules	11
4.1.9.2	carlhauser_server_tests.Singletons.test_singleton module	11
4.1.9.3	carlhauser_server_tests.Singletons.test_worker_start_stop module	12
4.1.9.4	Module contents	12
4.2	Submodules	12
4.3	carlhauser_server_tests.test_carlhauser_server module	12
4.4	Module contents	12
<b>5</b>	<b>common package</b>	<b>13</b>
5.1	Subpackages	13
5.1.1	common.Calibrator package	13
5.1.1.1	Submodules	13
5.1.1.2	common.Calibrator.calibrator_conf module	13
5.1.1.3	common.Calibrator.threshold_calibrator module	13
5.1.1.4	Module contents	13
5.1.2	common.ChartMaker package	13
5.1.2.1	Submodules	13
5.1.2.2	common.ChartMaker.confusion_matrix_generator module	13
5.1.2.3	common.ChartMaker.two_dimensions_plot module	13
5.1.2.4	Module contents	13
5.1.3	common.DataTurksAlgos package	13
5.1.3.1	Submodules	13
5.1.3.2	common.DataTurksAlgos.pictures_exporter module	13
5.1.3.3	Module contents	14
5.1.4	common.Graph package	14
5.1.4.1	Submodules	14
5.1.4.2	common.Graph.cluster module	14
5.1.4.3	common.Graph.edge module	14
5.1.4.4	common.Graph.graph_datastructure module	14
5.1.4.5	common.Graph.metadata module	14
5.1.4.6	common.Graph.node module	14
5.1.4.7	Module contents	14
5.1.5	common.HumanHash package	14
5.1.5.1	Submodules	14
5.1.5.2	common.HumanHash.dataturks_graph module	14
5.1.5.3	common.HumanHash.dataturks_parser module	14
5.1.5.4	common.HumanHash.docker_committer module	14
5.1.5.5	common.HumanHash.extractor module	14
5.1.5.6	common.HumanHash.humanizer module	14
5.1.5.7	common.HumanHash.referencer module	15
5.1.5.8	common.HumanHash.urlifier module	15
5.1.5.9	common.HumanHash.visjs_parser module	15
5.1.5.10	Module contents	15
5.1.6	common.ImportExport package	15
5.1.6.1	Submodules	15
5.1.6.2	common.ImportExport.json_import_export module	15
5.1.6.3	common.ImportExport.pickle_import_export module	16
5.1.6.4	common.ImportExport.picture_import_export module	16
5.1.6.5	Module contents	16
5.1.7	common.ParametersExplorer package	16
5.1.7.1	Submodules	16
5.1.7.2	common.ParametersExplorer.parameter_explorer module	16
5.1.7.3	Module contents	17
5.1.8	common.PerformanceDatastructs package	17

5.1.8.1	Submodules	17
5.1.8.2	common.PerformanceDatastructs.clustermatch_datastruct module	17
5.1.8.3	common.PerformanceDatastructs.perf_datastruct module	17
5.1.8.4	common.PerformanceDatastructs.stats_datastruct module	17
5.1.8.5	Module contents	17
5.1.9	common.TestInstanceLauncher package	17
5.1.9.1	Submodules	17
5.1.9.2	common.TestInstanceLauncher.one_db_conf module	17
5.1.9.3	common.TestInstanceLauncher.one_db_instance_launcher module	17
5.1.9.4	Module contents	17
5.2	Submodules	17
5.3	common.CustomException module	17
5.4	common.environment_variable module	17
5.5	Module contents	18
<b>6</b>	<b>common_tests package</b>	<b>19</b>
6.1	Subpackages	19
6.1.1	common_tests.Calibrator package	19
6.1.1.1	Submodules	19
6.1.1.2	common_tests.Calibrator.test_calibrator module	19
6.1.1.3	common_tests.Calibrator.test_calibrator_conf module	19
6.1.1.4	common_tests.Calibrator.test_threshold_calibrator module	19
6.1.1.5	Module contents	19
6.1.2	common_tests.ChartMaker package	19
6.1.2.1	Submodules	19
6.1.2.2	common_tests.ChartMaker.test_confusion_matrix module	19
6.1.2.3	Module contents	19
6.1.3	common_tests.DataTurksAlgo package	19
6.1.3.1	Submodules	19
6.1.3.2	common_tests.DataTurksAlgo.test_dataturks_algo module	19
6.1.3.3	Module contents	20
6.1.4	common_tests.Graph package	20
6.1.4.1	Submodules	20
6.1.4.2	common_tests.Graph.test_graph module	20
6.1.4.3	Module contents	20
6.1.5	common_tests.ImportExport package	20
6.1.5.1	Submodules	20
6.1.5.2	common_tests.ImportExport.test_json_import_export module	20
6.1.5.3	common_tests.ImportExport.test_pickle_import_export module	20
6.1.5.4	common_tests.ImportExport.test_picture_import_export module	21
6.1.5.5	Module contents	21
6.1.6	common_tests.ParametersExplorer package	21
6.1.6.1	Module contents	21
6.1.7	common_tests.PerformanceDatastructs package	21
6.1.7.1	Submodules	21
6.1.7.2	common_tests.PerformanceDatastructs.test_scores module	21
6.1.7.3	Module contents	22
6.1.8	common_tests.Scalability_evaluator package	22
6.1.8.1	Submodules	22
6.1.8.2	common_tests.Scalability_evaluator.test_scalability_conf module	22
6.1.8.3	Module contents	22
6.1.9	common_tests.TestInstanceLauncher package	22
6.1.9.1	Submodules	22
6.1.9.2	common_tests.TestInstanceLauncher.test_instance_launcher module	22

6.1.9.3	Module contents . . . . .	22
6.2	Submodules . . . . .	22
6.3	common_tests.test_environment_variable module . . . . .	22
6.4	Module contents . . . . .	22
<b>7</b>	<b>Indices and tables</b>	<b>23</b>
	<b>Python Module Index</b>	<b>25</b>
	<b>Index</b>	<b>27</b>





## CARLHAUSER\_CLIENT PACKAGE

### 1.1 Subpackages

#### 1.1.1 carlhauser\_client.API package

##### 1.1.1.1 Submodules

##### 1.1.1.2 carlhauser\_client.API.cli module

##### 1.1.1.3 carlhauser\_client.API.extended\_api module

##### 1.1.1.4 carlhauser\_client.API.simple\_api module

##### 1.1.1.5 Module contents

#### 1.1.2 carlhauser\_client.EvaluationTools package

##### 1.1.2.1 Subpackages

##### 1.1.2.1.1 carlhauser\_client.EvaluationTools.SimilarityGraphExtractor package

##### 1.1.2.1.1.1 Submodules

##### 1.1.2.1.1.2 carlhauser\_client.EvaluationTools.SimilarityGraphExtractor.similarity\_graph\_extractor module

##### 1.1.2.1.1.3 carlhauser\_client.EvaluationTools.SimilarityGraphExtractor.similarity\_graph\_quality\_evaluator module

##### 1.1.2.1.1.4 Module contents

##### 1.1.2.1.2 carlhauser\_client.EvaluationTools.StorageGraphExtractor package

##### 1.1.2.1.2.1 Submodules

##### 1.1.2.1.2.2 carlhauser\_client.EvaluationTools.StorageGraphExtractor.cluster\_matching\_quality\_evaluator module

##### 1.1.2.1.2.3 carlhauser\_client.EvaluationTools.StorageGraphExtractor.storage\_quality\_evaluator module

##### 1.1.2.1.2.4 Module contents

## CARLHAUSER\_CLIENT\_TESTS PACKAGE

### 2.1 Subpackages

#### 2.1.1 carlhauser\_client\_tests.API package

##### 2.1.1.1 Submodules

##### 2.1.1.2 carlhauser\_client\_tests.API.test\_API\_cli module

##### 2.1.1.3 carlhauser\_client\_tests.API.test\_API\_extended\_api module

##### 2.1.1.4 carlhauser\_client\_tests.API.test\_API\_simple\_api module

##### 2.1.1.5 Module contents

#### 2.1.2 carlhauser\_client\_tests.EvaluationTools package

##### 2.1.2.1 Subpackages

##### 2.1.2.1.1 carlhauser\_client\_tests.EvaluationTools.evaluator package

##### 2.1.2.1.1.1 Submodules

##### 2.1.2.1.1.2 carlhauser\_client\_tests.EvaluationTools.evaluator.test\_cluster\_matching\_quality\_evaluator module

##### 2.1.2.1.1.3 carlhauser\_client\_tests.EvaluationTools.evaluator.test\_similarity\_graph\_extractor module

```
class carlhauser_client_tests.EvaluationTools.evaluator.test_similarity_graph_extractor.TestSimilarityGraphExtractor
    Bases: unittest.case.TestCase
    Basic test cases.
    setUp()
        Hook method for setting up the test fixture before exercising it.
    test_absolute_truth_and_meaning()
```

#### 2.1.2.1.1.4 carlhauser\_client\_tests.EvaluationTools.evaluator.test\_similarity\_graph\_quality\_evaluator module

#### 2.1.2.1.1.5 carlhauser\_client\_tests.EvaluationTools.evaluator.test\_storage\_quality\_evaluator module

#### 2.1.2.1.1.6 Module contents

#### 2.1.2.2 Module contents

### 2.1.3 carlhauser\_client\_tests.Helpers package

#### 2.1.3.1 Submodules

#### 2.1.3.2 carlhauser\_client\_tests.Helpers.test\_dict\_utilities module

```
class carlhauser_client_tests.Helpers.test_dict_utilities.TestClusterMatcher (methodName='runTest')  
    Bases: unittest.case.TestCase  
    Basic test cases.  
    setUp()  
        Hook method for setting up the test fixture before exercising it.  
    test_absolute_truth_and_meaning()  
    test_dict_reverse()  
    test_dict_reverse_hard()  
    test_dict_reverse_realist()  
    test_dict_update()
```

#### 2.1.3.3 Module contents

## 2.2 Submodules

### 2.3 carlhauser\_client\_tests.context module

## 2.4 Module contents



## CARLHAUSER\_SERVER PACKAGE

### 3.1 Subpackages

#### 3.1.1 carlhauser\_server.API package

##### 3.1.1.1 Submodules

##### 3.1.1.2 carlhauser\_server.API.API\_server module

##### 3.1.1.3 carlhauser\_server.API.in\_memory\_files\_ops module

##### 3.1.1.4 Module contents

#### 3.1.2 carlhauser\_server.Configuration package

##### 3.1.2.1 Submodules

##### 3.1.2.2 carlhauser\_server.Configuration.algo\_conf module

##### 3.1.2.3 carlhauser\_server.Configuration.database\_conf module

##### 3.1.2.4 carlhauser\_server.Configuration.distance\_engine\_conf module

##### 3.1.2.5 carlhauser\_server.Configuration.feature\_extractor\_conf module

##### 3.1.2.6 carlhauser\_server.Configuration.webservice\_conf module

##### 3.1.2.7 Module contents

#### 3.1.3 carlhauser\_server.DatabaseAccessor package

##### 3.1.3.1 Submodules

##### 3.1.3.2 carlhauser\_server.DatabaseAccessor.database\_adder module

##### 3.1.3.3 carlhauser\_server.DatabaseAccessor.database\_common module

##### 3.1.3.4 carlhauser\_server.DatabaseAccessor.database\_requester module

##### 3.1.3.5 carlhauser\_server.DatabaseAccessor.database\_utilities module

##### 3.1.3.6 carlhauser\_server.DatabaseAccessor.database\_worker module

##### 3.1.3.7 Module contents

#### 3.1.4 carlhauser\_server.DistanceEngine package

Handle a list of process of one type

**append** (*process: carlhauser\_server.Processus.worker\_process.WorkerProcessus*)

**flush** ()

Flush the list of processes :return: Nothing. Change internal state of the object.

**flush\_not\_running** ()

Remove all the processes that are not detected as currently running. :return: Nothing. Change internal state of the object.

**get\_running\_processus** () → List[carlhauser\_server.Processus.worker\_process.WorkerProcessus]

Provide a sublist of the list of processus, which are currently running :return: a list of running workers

**is\_there\_alive\_workers** () → bool

Check if workers are alive, and return True if all worker are down :return: True if at least one worker is alive, False otherwise

**kill\_all\_processus** (*grace\_time=2*) → bool

Try to kill all workers of the given list, waiting <grace\_time> for each processus to finish (2 sec per default)  
:param grace\_time: Waiting time for a process before hard kill :return: True if successfully stopped, False otherwise

**wait\_until\_all\_stopped** (*timeout: int = 60*) → bool

Wait until all the workers are stopped (= terminated) Put timeout -1 if you don't want to function to timeout  
:param timeout: maximum waiting time for all processes to stop :return: True if all have stopped, False otherwise

### 3.1.7.3 carlhauser\_server.Processus.worker\_process module

**class** carlhauser\_server.Processus.worker\_process.**WorkerProcessus** (*worker\_path: pathlib.Path*)

Bases: object

**check\_status** (*id\_to\_display*)

Check and display status on logging output :param id\_to\_display: # of the worker, if you want to print one  
:return: True if process running, False otherwise

**get\_str** ()

**is\_running** () → bool

Check if current processus is running :return: True if process running, False otherwise

**launch** (*db\_conf: carlhauser\_server.Configuration.database\_conf.Default\_database\_conf = None, dist\_conf: carlhauser\_server.Configuration.distance\_engine\_conf.Default\_distance\_engine\_conf = None, fe\_conf: carlhauser\_server.Configuration.feature\_extractor\_conf.Default\_feature\_extractor\_conf = None, ws\_conf: carlhauser\_server.Configuration.webservice\_conf.Default\_webservice\_conf = None, mode=None*)

Construct an argument list and launch the process. :param db\_conf: configuration file :param dist\_conf: configuration file :param fe\_conf: configuration file :param ws\_conf: configuration file :param mode: configuration element :return: Nothing

**shutdown** (*grace\_time=10*) → bool

Try to stop within <gracetime> seconds the current processus/worker :param grace\_time: maximum waiting time :return: True if stopped, False otherwise

**wait\_until\_stopped** (*timeout: int = 60*) → bool

Wait until the worker is stopped (= terminated) Put timeout -1 if you don't want to function to timeout  
:param timeout: maximal waiting time for the process to stop :return: True if stopped, False otherwise

#### **3.1.7.4 Module contents**

### **3.1.8 carlhauser\_server.Singletons package**

#### **3.1.8.1 Submodules**

#### **3.1.8.2 carlhauser\_server.Singletons.database\_start\_stop module**

#### **3.1.8.3 carlhauser\_server.Singletons.singleton module**

#### **3.1.8.4 carlhauser\_server.Singletons.worker\_start\_stop module**

#### **3.1.8.5 Module contents**

## **3.2 Submodules**

### **3.3 carlhauser\_server.instance\_handler module**

## **3.4 Module contents**



## CARLHAUSER\_SERVER\_TESTS PACKAGE

### 4.1 Subpackages

#### 4.1.1 carlhauser\_server\_tests.API package

##### 4.1.1.1 Submodules

##### 4.1.1.2 carlhauser\_server\_tests.API.test\_in\_memory\_files\_ops module

```
class carlhauser_server_tests.API.test_in_memory_files_ops.TestInMemoryOperations (methodName)  
    Bases: unittest.case.TestCase  
    Basic test cases.  
  
    setUp()  
        Hook method for setting up the test fixture before exercising it.  
  
    test_absolute_truth_and_meaning()  
  
    test_bmp_conversion()  
  
    test_exif_and_hash()
```



#### 4.1.1.3 Module contents

### 4.1.2 carlhauser\_server\_tests.Configuration package

#### 4.1.2.1 Submodules

#### 4.1.2.2 carlhauser\_server\_tests.Configuration.test\_feature\_extractor\_conf module

#### 4.1.2.3 Module contents

### 4.1.3 carlhauser\_server\_tests.Data package

#### 4.1.3.1 Module contents

### 4.1.4 carlhauser\_server\_tests.DatabaseAccessor package

#### 4.1.4.1 Submodules

#### 4.1.4.2 carlhauser\_server\_tests.DatabaseAccessor.test\_db\_adder module

#### 4.1.4.3 Module contents

### 4.1.5 carlhauser\_server\_tests.DistanceEngine package

#### 4.1.5.1 Submodules

#### 4.1.5.2 carlhauser\_server\_tests.DistanceEngine.test\_distance\_engine module

#### 4.1.5.3 carlhauser\_server\_tests.DistanceEngine.test\_merging\_engine module

#### 4.1.5.4 Module contents

### 4.1.6 carlhauser\_server\_tests.FeatureExtractor package

#### 4.1.6.1 Module contents

### 4.1.7 carlhauser\_server\_tests.Helpers package

#### 4.1.7.1 Module contents

### 4.1.8 carlhauser\_server\_tests.Processus package

#### 4.1.8.1 Module contents

### 4.1.9 carlhauser\_server\_tests.Singletons package

#### 4.1.9.1 Submodules

#### 4.1.9.2 carlhauser\_server\_tests.Singletons.test\_singleton module

```
class carlhauser_server_tests.Singletons.test_singleton.testSingleton (methodName='runTest')  
    Bases: unittest.case.TestCase
```

---

## 4.1. Subpackages

Basic test cases.

```
class Derived
    Bases: object

    get_myvalue()

    get_value_shared()

    increment_value()

    value_shared = 0

setUp()
    Hook method for setting up the test fixture before exercising it.

test_singleton()

test_singleton_instance_equality()
```

#### 4.1.9.3 carlhauser\_server\_tests.Singletons.test\_worker\_start\_stop module

```
class carlhauser_server_tests.Singletons.test_worker_start_stop.testDistanceEngine (methodName)
    Bases: unittest.case.TestCase

    Basic test cases.

    setUp()
        Hook method for setting up the test fixture before exercising it.

    test_absolute_truth_and_meaning()
```

#### 4.1.9.4 Module contents

## 4.2 Submodules

## 4.3 carlhauser\_server\_tests.test\_carlhauser\_server module

## 4.4 Module contents

## COMMON PACKAGE

### 5.1 Subpackages

#### 5.1.1 common.Calibrator package

##### 5.1.1.1 Submodules

##### 5.1.1.2 common.Calibrator.calibrator\_conf module

##### 5.1.1.3 common.Calibrator.threshold\_calibrator module

##### 5.1.1.4 Module contents

#### 5.1.2 common.ChartMaker package

##### 5.1.2.1 Submodules

##### 5.1.2.2 common.ChartMaker.confusion\_matrix\_generator module

##### 5.1.2.3 common.ChartMaker.two\_dimensions\_plot module

##### 5.1.2.4 Module contents

#### 5.1.3 common.DataTurksAlgos package

##### 5.1.3.1 Submodules

##### 5.1.3.2 common.DataTurksAlgos.pictures\_exporter module

```
class common.DataTurksAlgos.pictures_exporter.PicturesExporter
    Bases: object
    export_dicts()
    iterate_over_dataturks_json()
    launch_copy()
    static list_to_dict(files_list: List[pathlib.Path]) → Dict[str, pathlib.Path]
    load_dataturks_json()
    static load_files(path: pathlib.Path) → List[pathlib.Path]
```

```
load_pictures_to_copy()
load_pictures_to_not_copy()
common.DataTurksAlgos.pictures_exporter.dir_path(path)
```

### 5.1.3.3 Module contents

## 5.1.4 common.Graph package

### 5.1.4.1 Submodules

#### 5.1.4.2 common.Graph.cluster module

#### 5.1.4.3 common.Graph.edge module

#### 5.1.4.4 common.Graph.graph\_datastructure module

#### 5.1.4.5 common.Graph.metadata module

#### 5.1.4.6 common.Graph.node module

### 5.1.4.7 Module contents

## 5.1.5 common.HumanHash package

### 5.1.5.1 Submodules

#### 5.1.5.2 common.HumanHash.dataturks\_graph module

#### 5.1.5.3 common.HumanHash.dataturks\_parser module

#### 5.1.5.4 common.HumanHash.docker\_committer module

```
class common.HumanHash.docker_committer.DockerCommitter(saves_limit)
    Bases: object
    commit_docker(docker_name) → str
    get_commit_name()
    inifinite_commit_docker(docker_name, nb_secs)
    remove_too_old_images()
common.HumanHash.docker_committer.main()
```

#### 5.1.5.5 common.HumanHash.extractor module

#### 5.1.5.6 common.HumanHash.humanizer module

```
class common.HumanHash.humanizer.Humanizer
    Bases: object
    static correct_name(name: str) → str
```

```

static get_name (content, file_suffix: str) → str
humanize_name (content: bytes, file_name: str, file_suffix: str, collision_removal: bool = True) → str
is_already_drawn (new_name: str) → bool
rename_all_files (path: pathlib.Path, output_path: pathlib.Path)
static sanity_check (output_path: pathlib.Path, previous_files_length: int)
common.HumanHash.humanizer.main()
common.HumanHash.humanizer.test()

```

#### 5.1.5.7 common.HumanHash.referencer module

#### 5.1.5.8 common.HumanHash.urlifier module

```

class common.HumanHash.urlifier.Referencer (ip, port)
    Bases: object
    static check_correctness (name: str)
    reference_all_files (path: pathlib.Path)
    static save_to_text (obj, file_path: pathlib.Path)
    store_value (name: pathlib.Path, reference_path)
common.HumanHash.urlifier.main()

```

#### 5.1.5.9 common.HumanHash.visjs\_parser module

#### 5.1.5.10 Module contents

### 5.1.6 common.ImportExport package

#### 5.1.6.1 Submodules

#### 5.1.6.2 common.ImportExport.json\_import\_export module

```

class common.ImportExport.json_import_export.Custom_JSON_Encoder (*,
                                                                    skip-
                                                                    keys=False,
                                                                    en-
                                                                    sure_ascii=True,
                                                                    check_circular=True,
                                                                    al-
                                                                    low_nan=True,
                                                                    sort_keys=False,
                                                                    in-
                                                                    dent=None,
                                                                    separa-
                                                                    tors=None,
                                                                    de-
                                                                    fault=None)
    Bases: json.encoder.JSONEncoder

```

Custom JSON Encoder to store Enum and custom configuration objects (for example) of the framework

**default (o)**

How to handle an object to encode :param o: the object to encode :return: the object encoded as json

`common.ImportExport.json_import_export.load_json(file_path: pathlib.Path)`

Loading an object/data from json. :param file\_path: The path to the json to load :return: The data extracted

`common.ImportExport.json_import_export.save_json(obj, file_path: pathlib.Path)`

Save an object as JSON :param obj: the object to save :param file\_path: the path to which the object should be saved :return: Nothing

### 5.1.6.3 common.ImportExport.pickle\_import\_export module

**class** `common.ImportExport.pickle_import_export.Pickler`

Bases: object

Very specific file to overwrite method to pickle some specific object types.

**static** `get_object_from_pickle(pickle_obj)`

**static** `get_pickle_from_object(obj)`

**static** `patch_Keypoint_pickiling()`

### 5.1.6.4 common.ImportExport.picture\_import\_export module

`common.ImportExport.picture_import_export.load_picture(file_path: pathlib.Path)`

Return a bytes representation of a picture :param file\_path: the path of the picture to load :return: The loaded picture

`common.ImportExport.picture_import_export.save_picture(obj, file_path: pathlib.Path)`

Save a bytes representation of a picture to a file :param obj: Object to save (is a picture) :param file\_path: path to which the object should be saved :return: Nothing

### 5.1.6.5 Module contents

## 5.1.7 common.ParametersExplorer package

### 5.1.7.1 Submodules

### 5.1.7.2 common.ParametersExplorer.parameter\_explorer module

**class** `common.ParametersExplorer.parameter_explorer.ParameterExplorer`

Bases: object

Extract parameters and quality of the storage graph. TODO : Should be reviewed and modified.

**launch** ()



### 5.1.7.3 Module contents

## 5.1.8 common.PerformanceDatastructs package

### 5.1.8.1 Submodules

#### 5.1.8.2 common.PerformanceDatastructs.clustermatch\_datastruct module

#### 5.1.8.3 common.PerformanceDatastructs.perf\_datastruct module

#### 5.1.8.4 common.PerformanceDatastructs.stats\_datastruct module

### 5.1.8.5 Module contents

## 5.1.9 common.TestInstanceLauncher package

### 5.1.9.1 Submodules

#### 5.1.9.2 common.TestInstanceLauncher.one\_db\_conf module

#### 5.1.9.3 common.TestInstanceLauncher.one\_db\_instance\_launcher module

### 5.1.9.4 Module contents

## 5.2 Submodules

## 5.3 common.CustomException module

```
exception common.CustomException.AlgoFeatureNotPresentError(message)
    Bases: Exception
```

## 5.4 common.environment\_variable module

```
class common.environment_variable.EndPoints
    Bases: common.environment_variable.JSON_parsable_Dict
    ADD_PICTURE = 'add_picture'
    EMPTY_PIPELINE = 'are_pipelines_empty'
    GET_REQUEST_RESULT = 'get_results'
    REQUEST_DB = 'export_db'
    REQUEST_PICTURE = 'request_similar_picture'
    WAIT_FOR_ADD = 'wait_for_add'
    WAIT_FOR_REQUEST = 'is_ready'

class common.environment_variable.JSON_parsable_Dict
    Bases: object
```

```
class common.environment_variable.JSON_parsable_Enum
    Bases: object

class common.environment_variable.QueueNames
    Bases: common.environment_variable.JSON_parsable_Dict

    DB_TO_ADD = 'db_to_add'

    DB_TO_REQUEST = 'db_to_request'

    FEATURE_TO_ADD = 'feature_to_add'

    FEATURE_TO_REQUEST = 'feature_to_request'

common.environment_variable.dir_path(path)

common.environment_variable.get_homedir() → pathlib.Path

common.environment_variable.load_client_logging_conf_file()

common.environment_variable.load_server_logging_conf_file()

common.environment_variable.make_big_line()

common.environment_variable.make_small_line()

common.environment_variable.resolve_path(file_path: pathlib.Path) → pathlib.Path
    If the provided path is not absolute, resolve it. Otherwise, do nothing :param file_path: the filepath to resolve
    :return: the absolute path
```

## 5.5 Module contents

## COMMON\_TESTS PACKAGE

### 6.1 Subpackages

#### 6.1.1 common\_tests.Calibrator package

##### 6.1.1.1 Submodules

##### 6.1.1.2 common\_tests.Calibrator.test\_calibrator module

##### 6.1.1.3 common\_tests.Calibrator.test\_calibrator\_conf module

##### 6.1.1.4 common\_tests.Calibrator.test\_threshold\_calibrator module

##### 6.1.1.5 Module contents

#### 6.1.2 common\_tests.ChartMaker package

##### 6.1.2.1 Submodules

##### 6.1.2.2 common\_tests.ChartMaker.test\_confusion\_matrix module

##### 6.1.2.3 Module contents

#### 6.1.3 common\_tests.DataTurksAlgo package

##### 6.1.3.1 Submodules

##### 6.1.3.2 common\_tests.DataTurksAlgo.test\_dataturks\_algo module

```
class common_tests.DataTurksAlgo.test_dataturks_algo.test_template (methodName='runTest')
    Bases: unittest.case.TestCase
    Basic test cases.

    check_size_folder (folder: pathlib.Path, size: int)

    clean_folder (base_path: pathlib.Path)

    create_sorted (base_path: pathlib.Path) → common.DataTurksAlgos.pictures_exporter.PicturesExporter
        Load the provided configuration file and create back the Configuration Object :return: Nothing
```

```
setUp()  
    Hook method for setting up the test fixture before exercising it.  
  
test_already_copied_not_recopied()  
  
test_first_copy_packets_size()  
  
test_to_delete()
```

### 6.1.3.3 Module contents

## 6.1.4 common\_tests.Graph package

### 6.1.4.1 Submodules

### 6.1.4.2 common\_tests.Graph.test\_graph module

### 6.1.4.3 Module contents

## 6.1.5 common\_tests.ImportExport package

### 6.1.5.1 Submodules

### 6.1.5.2 common\_tests.ImportExport.test\_json\_import\_export module

```
class common_tests.ImportExport.test_json_import_export.testJSONImportExport (methodName='runTest')  
    Bases: unittest.case.TestCase  
  
    Basic test cases.  
  
    setUp()  
        Hook method for setting up the test fixture before exercising it.  
  
    tearDown()  
        Hook method for deconstructing the test fixture after testing it.  
  
    test_absolute_truth_and_meaning()  
  
    test_json_export()  
  
    test_json_import()  
  
    test_json_import_export_consistency()
```

### 6.1.5.3 common\_tests.ImportExport.test\_pickle\_import\_export module

```
class common_tests.ImportExport.test_pickle_import_export.testPICKLEImportExport (methodName='runTest')  
    Bases: unittest.case.TestCase  
  
    Basic test cases.  
  
    setUp()  
        Hook method for setting up the test fixture before exercising it.  
  
    test_absolute_truth_and_meaning()  
  
    test_pickle_import_export_ORB()  
  
    test_pickle_import_export_consistency()
```

#### 6.1.5.4 `common_tests.ImportExport.test_picture_import_export` module

```
class common_tests.ImportExport.test_picture_import_export.testPICTUREImportExport (methodName)
    Bases: unittest.case.TestCase

    Basic test cases.

    setUp()
        Hook method for setting up the test fixture before exercising it.

    tearDown()
        Hook method for deconstructing the test fixture after testing it.

    test_absolute_truth_and_meaning()

    test_picture_export()

    test_picture_import()

    test_picture_import_export_consistency()
```

#### 6.1.5.5 Module contents

### 6.1.6 `common_tests.ParametersExplorer` package

#### 6.1.6.1 Module contents

### 6.1.7 `common_tests.PerformanceDatastructs` package

#### 6.1.7.1 Submodules

#### 6.1.7.2 `common_tests.PerformanceDatastructs.test_scores` module

```
class common_tests.PerformanceDatastructs.test_scores.TestClusterMatcher (methodName='runTest')
    Bases: unittest.case.TestCase

    Basic test cases.

    setUp()
        Hook method for setting up the test fixture before exercising it.

    test_absolute_truth_and_meaning()

    test_merge_scores()
```

### 6.1.7.3 Module contents

## 6.1.8 common\_tests.Scalability\_evaluator package

### 6.1.8.1 Submodules

### 6.1.8.2 common\_tests.Scalability\_evaluator.test\_scalability\_conf module

### 6.1.8.3 Module contents

## 6.1.9 common\_tests.TestInstanceLauncher package

### 6.1.9.1 Submodules

### 6.1.9.2 common\_tests.TestInstanceLauncher.test\_instance\_launcher module

```
class common_tests.TestInstanceLauncher.test_instance_launcher.test_tests_database_launcher
    Bases: unittest.case.TestCase

    Basic test cases.

    setUp()
        Hook method for setting up the test fixture before exercising it.

    test_absolute_truth_and_meaning()

    test_compute_score_for_one_threshold()
```

### 6.1.9.3 Module contents

## 6.2 Submodules

## 6.3 common\_tests.test\_environment\_variable module

```
class common_tests.test_environment_variable.TestEnvVariable(methodName='runTest')
    Bases: unittest.case.TestCase

    Basic test cases.

    setUp()
        Hook method for setting up the test fixture before exercising it.

    test_absolute_truth_and_meaning()

    test_dir_path()

    test_env_variable_presence()
```

## 6.4 Module contents

## INDICES AND TABLES

- `genindex`
- `modindex`
- `search`





## PYTHON MODULE INDEX

### C

carlhauser_client, <a href="#">2</a>	carlhauser_server_tests.Singletons.test_singleton, <a href="#">11</a>
carlhauser_client.API, <a href="#">2</a>	carlhauser_server_tests.Singletons.test_worker_star, <a href="#">12</a>
carlhauser_client.EvaluationTools, <a href="#">2</a>	common, <a href="#">18</a>
carlhauser_client.EvaluationTools.SimilarityGraphExtractor, <a href="#">2</a>	common.Calibrator, <a href="#">13</a>
carlhauser_client.EvaluationTools.StorageGraphExtractor, <a href="#">2</a>	common.ChartMaker, <a href="#">13</a>
carlhauser_client.Helpers, <a href="#">2</a>	common.CustomException, <a href="#">17</a>
carlhauser_client_tests, <a href="#">4</a>	common.DataTurksAlgos, <a href="#">14</a>
carlhauser_client_tests.API, <a href="#">3</a>	common.DataTurksAlgos.pictures_exporter, <a href="#">13</a>
carlhauser_client_tests.context, <a href="#">4</a>	common.environment_variable, <a href="#">17</a>
carlhauser_client_tests.EvaluationTools, <a href="#">4</a>	common.Graph, <a href="#">14</a>
carlhauser_client_tests.EvaluationTools.evaluator, <a href="#">4</a>	common.HumanHash, <a href="#">15</a>
carlhauser_client_tests.EvaluationTools.evaluator.test_similarity_graph_extractor, <a href="#">3</a>	common.HumanHash.docker_committer, <a href="#">14</a>
carlhauser_client_tests.Helpers, <a href="#">4</a>	common.HumanHash.humanizer, <a href="#">14</a>
carlhauser_client_tests.Helpers.test_dict_utilities, <a href="#">4</a>	common.HumanHash.urlifier, <a href="#">15</a>
carlhauser_server.Processus, <a href="#">8</a>	common.ImportExport, <a href="#">16</a>
carlhauser_server.Processus.processus_list, <a href="#">6</a>	common.ImportExport.json_import_export, <a href="#">15</a>
carlhauser_server.Processus.worker_process, <a href="#">7</a>	common.ImportExport.pickle_import_export, <a href="#">16</a>
carlhauser_server_tests, <a href="#">12</a>	common.ImportExport.picture_import_export, <a href="#">16</a>
carlhauser_server_tests.API, <a href="#">11</a>	common.ParametersExplorer, <a href="#">17</a>
carlhauser_server_tests.API.test_in_memory_files_ops, <a href="#">9</a>	common.ParametersExplorer.parameter_explorer, <a href="#">16</a>
carlhauser_server_tests.Configuration, <a href="#">11</a>	common.PerformanceDatastructs, <a href="#">17</a>
carlhauser_server_tests.Data, <a href="#">11</a>	common.TestInstanceLauncher, <a href="#">17</a>
carlhauser_server_tests.DatabaseAccessor, <a href="#">11</a>	common_tests, <a href="#">22</a>
carlhauser_server_tests.DistanceEngine, <a href="#">11</a>	common_tests.Calibrator, <a href="#">19</a>
carlhauser_server_tests.FeatureExtractor, <a href="#">11</a>	common_tests.ChartMaker, <a href="#">19</a>
carlhauser_server_tests.Helpers, <a href="#">11</a>	common_tests.DataTurksAlgo, <a href="#">20</a>
carlhauser_server_tests.Processus, <a href="#">11</a>	common_tests.DataTurksAlgo.test_dataturks_algo, <a href="#">19</a>
carlhauser_server_tests.Singletons, <a href="#">12</a>	common_tests.Graph, <a href="#">20</a>
	common_tests.ImportExport, <a href="#">21</a>
	common_tests.ImportExport.test_json_import_export, <a href="#">20</a>
	common_tests.ImportExport.test_pickle_import_export, <a href="#">20</a>
	common_tests.ImportExport.test_picture_import_export, <a href="#">20</a>

[21](#)  
common\_tests.ParametersExplorer, [21](#)  
common\_tests.PerformanceDatastructs, [22](#)  
common\_tests.PerformanceDatastructs.test\_scores,  
    [21](#)  
common\_tests.Scalability\_evaluator, [22](#)  
common\_tests.test\_environment\_variable,  
    [22](#)  
common\_tests.TestInstanceLauncher, [22](#)  
common\_tests.TestInstanceLauncher.test\_instance\_launcher,  
    [22](#)

## INDEX

### A

ADD\_PICTURE (*common.environment\_variable.EndPoints*  
attribute), 17

AlgoFeatureNotPresentError, 17

append() (*carlhauser\_server.Processus.processus\_list.ProcessesList*  
method), 7

### C

carlhauser\_client (module), 2

carlhauser\_client.API (module), 2

carlhauser\_client.EvaluationTools (mod-  
ule), 2

carlhauser\_client.EvaluationTools.SimilarityGraphExtractor  
(module), 2

carlhauser\_client.EvaluationTools.StorageGraphExtractor  
(module), 2

carlhauser\_client.Helpers (module), 2

carlhauser\_client\_tests (module), 4

carlhauser\_client\_tests.API (module), 3

carlhauser\_client\_tests.context (module),  
4

carlhauser\_client\_tests.EvaluationTools  
(module), 4

carlhauser\_client\_tests.EvaluationTools.evaluator  
(module), 4

carlhauser\_client\_tests.EvaluationTools.evaluator.test\_similarity\_graph\_extractor  
(module), 3

carlhauser\_client\_tests.Helpers (module),  
4

carlhauser\_client\_tests.Helpers.test\_dict\_utilities  
(module), 4

carlhauser\_server.Processus (module), 8

carlhauser\_server.Processus.processus\_list  
(module), 6

carlhauser\_server.Processus.worker\_process  
(module), 7

carlhauser\_server\_tests (module), 12

carlhauser\_server\_tests.API (module), 11

carlhauser\_server\_tests.API.test\_in\_memory\_files\_ops  
(module), 9

carlhauser\_server\_tests.Configuration  
(module), 11

carlhauser\_server\_tests.Data (module), 11

carlhauser\_server\_tests.DatabaseAccessor  
(module), 11

carlhauser\_server\_tests.DistanceEngine  
(module), 11

carlhauser\_server\_tests.FeatureExtractor  
(module), 11

carlhauser\_server\_tests.Helpers (module),  
11

carlhauser\_server\_tests.Processus (mod-  
ule), 11

carlhauser\_server\_tests.Singletons (mod-  
ule), 12

carlhauser\_server\_tests.Singletons.test\_singleton  
(module), 11

carlhauser\_server\_tests.Singletons.test\_worker\_sta  
(module), 12

check\_correctness() (com-  
mon.HumanHash.urlifier.Referencer  
method), 15

check\_size\_folder() (com-  
mon\_tests.DataTurksAlgo.test\_dataturks\_algo.test\_template  
method), 19

check\_status() (carl-  
hauser\_server.Processus.worker\_process.WorkerProcessus  
method), 7

clean\_folder() (com-  
mon\_tests.DataTurksAlgo.test\_dataturks\_algo.test\_template  
method), 19

commit\_docker() (com-  
mon.HumanHash.docker\_committer.DockerCommitter  
method), 14

common (module), 18

common.Calibrator (module), 13

common.ChartMaker (module), 13

common.CustomException (module), 17

common.DataTurksAlgos (module), 14

common.DataTurksAlgos.pictures\_exporter  
(module), 13

common.environment\_variable (module), 17

common.Graph (module), 14

common.HumanHash (module), 15

common.HumanHash.docker\_committer (module), 14

common.HumanHash.humanizer (module), 14

common.HumanHash.urlifier (module), 15

common.ImportExport (module), 16

common.ImportExport.json\_import\_export (module), 15

common.ImportExport.pickle\_import\_export (module), 16

common.ImportExport.picture\_import\_export (module), 16

common.ParametersExplorer (module), 17

common.ParametersExplorer.parameter\_explorer (module), 16

common.PerformanceDatastructs (module), 17

common.TestInstanceLauncher (module), 17

common\_tests (module), 22

common\_tests.Calibrator (module), 19

common\_tests.ChartMaker (module), 19

common\_tests.DataTurksAlgo (module), 20

common\_tests.DataTurksAlgo.test\_dataturks\_algo (module), 19

common\_tests.Graph (module), 20

common\_tests.ImportExport (module), 21

common\_tests.ImportExport.test\_json\_import\_export (module), 20

common\_tests.ImportExport.test\_pickle\_import\_export (module), 20

common\_tests.ImportExport.test\_picture\_import\_export (module), 21

common\_tests.ParametersExplorer (module), 21

common\_tests.PerformanceDatastructs (module), 22

common\_tests.PerformanceDatastructs.test\_scores (module), 21

common\_tests.Scalability\_evaluator (module), 22

common\_tests.test\_environment\_variable (module), 22

common\_tests.TestInstanceLauncher (module), 22

common\_tests.TestInstanceLauncher.test\_instance\_launcher (module), 22

correct\_name () (common.HumanHash.humanizer.Humanizer static method), 14

create\_sorted () (common\_tests.DataTurksAlgo.test\_dataturks\_algo.test\_template method), 19

Custom\_JSON\_Encoder (class in common.ImportExport.json\_import\_export), 15

## D

DB\_TO\_ADD (common.environment\_variable.QueueNames attribute), 18

DB\_TO\_REQUEST (common.environment\_variable.QueueNames attribute), 18

default () (common.ImportExport.json\_import\_export.Custom\_JSON\_Encoder method), 15

dir\_path () (in module common.DataTurksAlgos.pictures\_exporter), 14

dir\_path () (in module common.environment\_variable), 18

DockerCommitter (class in common.HumanHash.docker\_committer), 14

## E

EMPTY\_PIPELINE (common.environment\_variable.EndPoints attribute), 17

EndPoints (class in common.environment\_variable), 17

export\_dicts () (common.DataTurksAlgos.pictures\_exporter.PicturesExporter method), 13

## F

FEATURE\_TO\_ADD (common.environment\_variable.QueueNames attribute), 18

FEATURE\_TO\_REQUEST (common.environment\_variable.QueueNames attribute), 18

flush () (carlhauser\_server.Processus.processus\_list.ProcessesList method), 7

flush\_not\_running () (carlhauser\_server.Processus.processus\_list.ProcessesList method), 7

## G

get\_commit\_name () (common.HumanHash.docker\_committer.DockerCommitter method), 14

get\_homedir () (in module common.environment\_variable), 18

get\_myvalue () (carlhauser\_server\_tests.Singletons.test\_singleton.testSingleton.Derived method), 12

get\_name () (common.HumanHash.humanizer.Humanizer static method), 14

get\_object\_from\_pickle () (common.ImportExport.pickle\_import\_export.Pickler static method), 16

get\_pickle\_from\_object() (common.ImportExport.pickle\_import\_export.Pickler static method), 16  
 GET\_REQUEST\_RESULT (common.environment\_variable.EndPoints attribute), 17  
 get\_running\_processus() (carlhauser\_server.Processus.processus\_list.ProcessesList method), 7  
 get\_str() (carlhauser\_server.Processus.worker\_process.WorkerProcessus method), 7  
 get\_value\_shared() (carlhauser\_server\_tests.Singletons.test\_singleton.testSingleton.Derived method), 12  
**H**  
 humanize\_name() (common.mon.HumanHash.humanizer.Humanizer method), 15  
 Humanizer (class in common.HumanHash.humanizer), 14  
**I**  
 increment\_value() (carlhauser\_server\_tests.Singletons.test\_singleton.testSingleton.Derived method), 12  
 inifnite\_commit\_docker() (common.mon.HumanHash.docker\_committer.DockerCommitter method), 14  
 is\_already\_drawn() (common.mon.HumanHash.humanizer.Humanizer method), 15  
 is\_running() (carlhauser\_server.Processus.worker\_process.WorkerProcessus method), 7  
 is\_there\_alive\_workers() (carlhauser\_server.Processus.processus\_list.ProcessesList method), 7  
 iterate\_over\_dataturks\_json() (common.mon.DataTurksAlgos.pictures\_exporter.PicturesExporter method), 13  
**J**  
 JSON\_parsable\_Dict (class in common.mon.environment\_variable), 17  
 JSON\_parsable\_Enum (class in common.mon.environment\_variable), 17  
**K**  
 kill\_all\_processus() (carlhauser\_server.Processus.processus\_list.ProcessesList method), 7  
**L**  
 launch() (carlhauser\_server.Processus.worker\_process.WorkerProcessus method), 7  
 launch() (common.ParametersExplorer.parameter\_explorer.ParameterExplorer method), 16  
 launch\_copy() (common.mon.DataTurksAlgos.pictures\_exporter.PicturesExporter method), 13  
 list\_to\_dict() (common.mon.DataTurksAlgos.pictures\_exporter.PicturesExporter static method), 13  
 load\_client\_logging\_conf\_file() (in module common.environment\_variable), 18  
 load\_dataturks\_json() (common.mon.DataTurksAlgos.pictures\_exporter.PicturesExporter method), 13  
 load\_files() (common.mon.DataTurksAlgos.pictures\_exporter.PicturesExporter static method), 13  
 load\_json() (in module common.ImportExport.json\_import\_export), 16  
 load\_picture() (in module common.ImportExport.picture\_import\_export), 16  
 load\_pictures\_to\_copy() (common.mon.DataTurksAlgos.pictures\_exporter.PicturesExporter method), 14  
 load\_pictures\_to\_not\_copy() (common.mon.DataTurksAlgos.pictures\_exporter.PicturesExporter method), 14  
 load\_server\_logging\_conf\_file() (in module common.environment\_variable), 18  
**M**  
 main() (in module common.mon.HumanHash.docker\_committer), 14  
 main() (in module common.HumanHash.humanizer), 15  
 make\_big\_line() (in module common.mon.environment\_variable), 18  
 make\_small\_line() (in module common.mon.environment\_variable), 18  
**P**  
 ParameterExplorer (class in common.ParametersExplorer.parameter\_explorer), 16  
 patch\_Keypoint\_pickiling() (common.ImportExport.pickle\_import\_export.Pickler static method), 16  
 Pickler (class in common.ImportExport.pickle\_import\_export), 16

16  
 PicturesExporter (class in com-  
 mon.DataTurksAlgos.pictures\_exporter),  
 13  
 ProcessesList (class in carl-  
 hauser\_server.Processus.processus\_list),  
 6

## Q

QueueNames (class in common.environment\_variable),  
 18

## R

reference\_all\_files() (com-  
 mon.HumanHash.urlifier.Referencer method),  
 15  
 Referencer (class in common.HumanHash.urlifier),  
 15  
 remove\_too\_old\_images() (com-  
 mon.HumanHash.docker\_committer.DockerCommitter  
 method), 14  
 rename\_all\_files() (com-  
 mon.HumanHash.humanizer.Humanizer  
 method), 15  
 REQUEST\_DB (common.environment\_variable.EndPoints  
 attribute), 17  
 REQUEST\_PICTURE (com-  
 mon.environment\_variable.EndPoints at-  
 tribute), 17  
 resolve\_path() (in module com-  
 mon.environment\_variable), 18

## S

sanity\_check() (com-  
 mon.HumanHash.humanizer.Humanizer  
 static method), 15  
 save\_json() (in module com-  
 mon.ImportExport.json\_import\_export),  
 16  
 save\_picture() (in module com-  
 mon.ImportExport.picture\_import\_export),  
 16  
 save\_to\_text() (com-  
 mon.HumanHash.urlifier.Referencer static  
 method), 15  
 setUp() (carlhauser\_client\_tests.EvaluationTools.evaluator.test\_similarity\_graph\_extractor.testClusterMatcher  
 method), 3  
 setUp() (carlhauser\_client\_tests.Helpers.test\_dict\_utilities.TestClusterMatcher  
 method), 4  
 setUp() (carlhauser\_server\_tests.API.test\_in\_memory\_files\_ops.TestInMemoryOperations  
 method), 9  
 setUp() (carlhauser\_server\_tests.Singletons.test\_singleton.testSingleton  
 method), 12

setUp() (carlhauser\_server\_tests.Singletons.test\_worker\_start\_stop.testDistan-  
 method), 12  
 setUp() (common\_tests.DataTurksAlgo.test\_dataturks\_algo.test\_template\_extractor.testClusterMatcher  
 method), 19  
 setUp() (common\_tests.ImportExport.test\_json\_import\_export.testJSONImportExportOperations  
 method), 20  
 setUp() (common\_tests.ImportExport.test\_pickle\_import\_export.testPICKLEImportExportOperations  
 method), 20  
 setUp() (common\_tests.ImportExport.test\_picture\_import\_export.testPICTUREImportExportOperations  
 method), 21  
 setUp() (common\_tests.PerformanceDatastructs.test\_scores.TestClusterMatcher  
 method), 21  
 setUp() (common\_tests.test\_environment\_variable.TestEnvVariable  
 method), 22  
 setUp() (common\_tests.TestInstanceLauncher.test\_instance\_launcher.testInstanceLauncher  
 method), 22  
 shutdown() (carlhauser\_server.Processus.worker\_process.WorkerProcess  
 method), 7  
 store\_value() (com-  
 mon.HumanHash.urlifier.Referencer method),  
 15

## T

tearDown() (common\_tests.ImportExport.test\_json\_import\_export.testJSONImportExportOperations  
 method), 20  
 tearDown() (common\_tests.ImportExport.test\_picture\_import\_export.testPICTUREImportExportOperations  
 method), 21  
 test() (in module common.HumanHash.humanizer),  
 15  
 test\_absolute\_truth\_and\_meaning() (carl-  
 hauser\_client\_tests.EvaluationTools.evaluator.test\_similarity\_graph\_extractor.testClusterMatcher  
 method), 3  
 test\_absolute\_truth\_and\_meaning() (carl-  
 hauser\_client\_tests.Helpers.test\_dict\_utilities.TestClusterMatcher  
 method), 4  
 test\_absolute\_truth\_and\_meaning() (carl-  
 hauser\_server\_tests.API.test\_in\_memory\_files\_ops.TestInMemoryOperations  
 method), 9  
 test\_absolute\_truth\_and\_meaning() (carl-  
 hauser\_server\_tests.Singletons.test\_worker\_start\_stop.testDistan-  
 method), 12  
 test\_absolute\_truth\_and\_meaning() (com-  
 mon\_tests.ImportExport.test\_json\_import\_export.testJSONImportExportOperations  
 method), 20  
 test\_absolute\_truth\_and\_meaning() (com-  
 mon\_tests.ImportExport.test\_pickle\_import\_export.testPICKLEImportExportOperations  
 method), 20  
 test\_absolute\_truth\_and\_meaning() (com-  
 mon\_tests.ImportExport.test\_picture\_import\_export.testPICTUREImportExportOperations  
 method), 21  
 test\_absolute\_truth\_and\_meaning() (com-  
 mon\_tests.PerformanceDatastructs.test\_scores.TestClusterMatcher  
 method), 21  
 test\_absolute\_truth\_and\_meaning() (com-

`mon_tests.test_environment_variable.TestEnvVariable`  
`method), 22`  
`test_absolute_truth_and_meaning()` (com- `test_picture_export()` (com-  
`mon_tests.TestInstanceLauncher.test_instance_launcher.test_instance_launcher`  
`method), 22` `method), 21`  
`test_already_copied_not_recopied()` (com- `test_picture_import()` (com-  
`mon_tests.DataTurksAlgo.test_dataturks_algo.test_template`  
`method), 20` `method), 21`  
`test_bmp_conversion()` (carl- `test_picture_import_export_consistency()`  
`hauser_server_tests.API.test_in_memory_files_ops.TestInMemoryOperations`  
`method), 9` `method), 21`  
`test_compute_score_for_one_threshold()` `test_singleton()` (carl-  
`(common_tests.TestInstanceLauncher.test_instance_launcher.test_instance_launcher`  
`method), 22` `method), 12`  
`test_dict_reverse()` (carl- `test_singleton_instance_equality()` (carl-  
`hauser_client_tests.Helpers.test_dict_utilities.TestClusterMatcher`  
`method), 4` `method), 12`  
`test_dict_reverse_hard()` (carl- `test_template` (class in com-  
`hauser_client_tests.Helpers.test_dict_utilities.TestClusterMatcher`  
`method), 4` `19`  
`test_dict_reverse_realist()` (carl- `test_tests_database_launcher` (class in com-  
`hauser_client_tests.Helpers.test_dict_utilities.TestClusterMatcher`  
`method), 4` `22`  
`test_dict_update()` (carl- `test_to_delete()` (com-  
`hauser_client_tests.Helpers.test_dict_utilities.TestClusterMatcher`  
`method), 4` `method), 20`  
`test_dir_path()` (com- `TestClusterMatcher` (class in carl-  
`mon_tests.test_environment_variable.TestEnvVariable` `hauser_client_tests.EvaluationTools.evaluator.test_similarity_gra`  
`method), 22` `3`  
`test_env_variable_presence()` (com- `TestClusterMatcher` (class in carl-  
`mon_tests.test_environment_variable.TestEnvVariable` `hauser_client_tests.Helpers.test_dict_utilities`  
`method), 22` `4`  
`test_exif_and_hash()` (carl- `TestClusterMatcher` (class in com-  
`hauser_server_tests.API.test_in_memory_files_ops.TestInMemoryOperations`  
`method), 9` `21`  
`test_first_copy_packets_size()` (com- `testDistanceEngine` (class in carl-  
`mon_tests.DataTurksAlgo.test_dataturks_algo.test_template`  
`method), 20` `12`  
`test_json_export()` (com- `TestEnvVariable` (class in com-  
`mon_tests.ImportExport.test_json_import_export.testJSONImportExport`  
`method), 20` `TestInMemoryOperations` (class in carl-  
`test_json_import()` (com- `hauser_server_tests.API.test_in_memory_files_ops`  
`mon_tests.ImportExport.test_json_import_export.testJSONImportExport`  
`method), 20` `testJSONImportExport` (class in com-  
`test_json_import_export_consistency()` `mon_tests.ImportExport.test_json_import_export`  
`(common_tests.ImportExport.test_json_import_export.testJSONImportExport`  
`method), 20` `testPICKLEImportExport` (class in com-  
`test_merge_scores()` (com- `mon_tests.ImportExport.test_pickle_import_export`  
`mon_tests.PerformanceDatastructs.test_scores.TestClusterMatcher`  
`method), 21` `testPICTUREImportExport` (class in com-  
`test_pickle_import_export_consistency()` `mon_tests.ImportExport.test_picture_import_export`  
`(common_tests.ImportExport.test_pickle_import_export.testPICKLEImportExport`  
`method), 20` `testSingleton` (class in carl-  
`test_pickle_import_export_ORB()` (com- `hauser_server_tests.Singletons.test_singleton`



11  
testSingleton.Derived (class in carl-  
hauser\_server\_tests.Singleton.test\_singleton),  
12

## V

value\_shared (carl-  
hauser\_server\_tests.Singleton.test\_singleton.testSingleton.Derived  
attribute), 12

## W

WAIT\_FOR\_ADD (com-  
mon.environment\_variable.EndPoints at-  
tribute), 17

WAIT\_FOR\_REQUEST (com-  
mon.environment\_variable.EndPoints at-  
tribute), 17

wait\_until\_all\_stopped() (carl-  
hauser\_server.Processus.processus\_list.ProcessesList  
method), 7

wait\_until\_stopped() (carl-  
hauser\_server.Processus.worker\_process.WorkerProcessus  
method), 7

WorkerProcessus (class in carl-  
hauser\_server.Processus.worker\_process),  
7