
imtools Documentation

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Contents

1	imtools package	3
1.1	Subpackages	3
1.2	Submodules	3
1.3	imtools.misc module	3
1.4	imtools.qmisc module	3
1.5	imtools.sample_data module	3
1.6	imtools.segmentation module	4
1.7	imtools.surface_measurement module	4
1.8	imtools.tools module	4
1.9	imtools.uiThreshold module	4
1.10	imtools.image_manipulation module	6
1.11	Module contents	6
2	Indices and tables	7
	Python Module Index	9

Contents:

Test text

1.1 Subpackages

1.2 Submodules

1.3 imtools.misc module

1.4 imtools.qmisc module

1.5 imtools.sample_data module

`imtools.sample_data.check_python_architecture` (*pythondir*, *target_arch_str*)

functions check architecture of target python

`imtools.sample_data.checksum` (*path*, *hashfunc*='md5')

Return checksum given by path. Wildcards can be used in check sum. Function is strongly dependent on checksumdir package by 'cakepietoast'.

Parameters

- **path** –
- **hashfunc** –

Returns

`imtools.sample_data.donut` ()

Generate donut like shape with stick inside

Returns datap with keys data3d, segmentation and voxelsize_mm

```
imtools.sample_data.download_and_run(url, local_file_name)
imtools.sample_data.downzip(url, destination='./sample_data')
    Download, unzip and delete.
imtools.sample_data.file_copy_and_replace_lines(in_path, out_path)
imtools.sample_data.generate(size=100, liver_intensity=100, noise_intensity=20, portal_vein_intensity=130, spleen_intensity=90)
imtools.sample_data.get(data_label=None, destination_dir='.')
    Download sample data by data label. Labels can be listed by sample_data.data_urls.keys():param data_label:
    label of data. If it is set to None, all data are downloaded :param destination_dir: output dir for data :return:
imtools.sample_data.get_conda_path()
    Return anaconda or miniconda directory :return: anaconda directory
imtools.sample_data.get_sample_data(data_label=None, destination_dir='.')
    Same as get() due to back compatibility :param data_label: :param destination_dir: :return:
imtools.sample_data.main()
imtools.sample_data.make_icon()
imtools.sample_data.remove(local_file_name)
imtools.sample_data.submodule_update()
```

1.6 imtools.segmentation module

1.7 imtools.surface_measurement module

Measurement of object surface.

data3d: 3D numpy array segmentation: 3D numpyarray

```
imtools.surface_measurement.bufford_needle_sond(data3d, voxelsize_mm, raster_mm,
axis, aoi)
imtools.surface_measurement.find_edge(segmentation, axis)
imtools.surface_measurement.main()
imtools.surface_measurement.surface_density(segmentation, voxelsize_mm, aoi=None,
sond_raster_mm=None)
```

Segmentation is ndarray with 0 and 1

Voxelsize_mm is array of three numbers specifying size of voxel for each axis

Aoi is specify area of interest. It is ndarray with 0 and 1

Sond_raster_mm unimplemented. It is parametr of sonds design

1.8 imtools.tools module

1.9 imtools.uiThreshold module

Purpose: (CZE-ZCU-FAV-KKY) Liver medical project

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Created: 2012/11/08 Copyright: (c) Pavel Volkovinsky

```
imtools.uiThreshold.main()

imtools.uiThreshold.make_image_processing(data,          voxelsize_mm,          seeds=None,
                                          sigma_mm=1,      min_threshold=None,
                                          max_threshold=None, closeNum=0, open-
                                          Num=0,          min_threshold_auto_method="",
                                          fill_holes=True,  get_priority_objects=True,
                                          nObj=1, debug=False)

imtools.uiThreshold.prepare_threshold_from_seeds(data,          seeds,
                                                  min_threshold_auto_method)

class imtools.uiThreshold.uiThreshold(data, voxel, threshold=None, interactiv-
                                     ity=True, number=100.0, inputSigma=-1,
                                     nObj=10, biggestObjects=True, useSeedsOf-
                                     CompactObjects=True, binaryClosingItera-
                                     tions=2, binaryOpeningIterations=0, seeds=None,
                                     cmap=<Mock          name='mock.cm.Greys_r'
                                     id='139800798118352'>, fillHoles=True, fig-
                                     ure=None, threshold_auto_method="", thresh-
                                     old_upper=None, debug=True)
```

UI pro prahovani 3D dat.

buttonContinue (event)

buttonMaxNext (event)

buttonMaxNext5 (event)

buttonMaxPrev (event)

buttonMaxPrev5 (event)

buttonMaxUpdate (event, value)

buttonMinNext (event)

buttonMinNext5 (event)

buttonMinPrev (event)

buttonMinPrev5 (event)

buttonMinUpdate (event, value)

buttonNextClosing (event)

buttonNextOpening (event)

buttonPrevClosing (event)

buttonPrevOpening (event)

buttonReset (event)

debugInfo ()

drawVisualization ()

Vykresleni dat.

getBiggestObjects ()

Vraceni nejvetsich objektu (nebo objektu, ktere obsahuji prioritni seedy).

returnLastThreshold()

run()

Spusteni UI.

updateImage(val)

Hlavni update metoda. Cinny kod pro gaussovske filtrovani, prahovani, binarni uzavreni a otevreni a vraceni nejvetsich nebo oznacenych objektu.

1.10 imtools.image_manipulation module

1.11 Module contents

CHAPTER 2

Indices and tables

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

i

- `imtools`, 6
- `imtools.misc`, 3
- `imtools.sample_data`, 3
- `imtools.surface_measurement`, 4
- `imtools.uiThreshold`, 4

B

bufford_needle_sond() (in module imtools.surface_measurement), 4
 buttonContinue() (imtools.uiThreshold.uiThreshold method), 5
 buttonMaxNext() (imtools.uiThreshold.uiThreshold method), 5
 buttonMaxNext5() (imtools.uiThreshold.uiThreshold method), 5
 buttonMaxPrev() (imtools.uiThreshold.uiThreshold method), 5
 buttonMaxPrev5() (imtools.uiThreshold.uiThreshold method), 5
 buttonMaxUpdate() (imtools.uiThreshold.uiThreshold method), 5
 buttonMinNext() (imtools.uiThreshold.uiThreshold method), 5
 buttonMinNext5() (imtools.uiThreshold.uiThreshold method), 5
 buttonMinPrev() (imtools.uiThreshold.uiThreshold method), 5
 buttonMinPrev5() (imtools.uiThreshold.uiThreshold method), 5
 buttonMinUpdate() (imtools.uiThreshold.uiThreshold method), 5
 buttonNextClosing() (imtools.uiThreshold.uiThreshold method), 5
 buttonNextOpening() (imtools.uiThreshold.uiThreshold method), 5
 buttonPrevClosing() (imtools.uiThreshold.uiThreshold method), 5
 buttonPrevOpening() (imtools.uiThreshold.uiThreshold method), 5
 buttonReset() (imtools.uiThreshold.uiThreshold method), 5

C

check_python_architecture() (in module imtools.sample_data), 3

checksum() (in module imtools.sample_data), 3

D

debugInfo() (imtools.uiThreshold.uiThreshold method), 5
 donut() (in module imtools.sample_data), 3
 download_and_run() (in module imtools.sample_data), 4
 downzip() (in module imtools.sample_data), 4
 drawVisualization() (imtools.uiThreshold.uiThreshold method), 5

F

file_copy_and_replace_lines() (in module imtools.sample_data), 4
 find_edge() (in module imtools.surface_measurement), 4

G

generate() (in module imtools.sample_data), 4
 get() (in module imtools.sample_data), 4
 get_conda_path() (in module imtools.sample_data), 4
 get_sample_data() (in module imtools.sample_data), 4
 getBiggestObjects() (imtools.uiThreshold.uiThreshold method), 5

I

imtools (module), 6
 imtools.misc (module), 3
 imtools.sample_data (module), 3
 imtools.surface_measurement (module), 4
 imtools.uiThreshold (module), 4

M

main() (in module imtools.sample_data), 4
 main() (in module imtools.surface_measurement), 4
 main() (in module imtools.uiThreshold), 5
 make_icon() (in module imtools.sample_data), 4
 make_image_processing() (in module imtools.uiThreshold), 5

P

`prepare_threshold_from_seeds()` (in module `imtools.uiThreshold`), [5](#)

R

`remove()` (in module `imtools.sample_data`), [4](#)

`returnLastThreshold()` (`imtools.uiThreshold.uiThreshold` method), [5](#)

`run()` (`imtools.uiThreshold.uiThreshold` method), [6](#)

S

`submodule_update()` (in module `imtools.sample_data`), [4](#)

`surface_density()` (in module `imtools.surface_measurement`), [4](#)

U

`uiThreshold` (class in `imtools.uiThreshold`), [5](#)

`updateImage()` (`imtools.uiThreshold.uiThreshold` method), [6](#)