
pyslide Documentation

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The documentation for `pyslide` is mainly organized by sub-modules.

- *User Documentation*
- *About pyslide*

1.1 contour_valid

```
def contour_valid(cnt_arr): """ Check contour is valid or not.
    """
```

1.2 contour_to_poly_valid

```
def contour_to_poly_valid(cnt_arr): """ Convert contour to poly valid if not poly valid
    """
```

1.3 cnt_inside_wsi

```
def cnt_inside_wsi(cnt_arr, wsi_h, wsi_w): """ Determine contour is fully inside whole slide image or not.
    """
```

1.4 intersect_cnt_wsi

```
def intersect_cnt_wsi(cnt_arr, wsi_h, wsi_w): """ Cutting out the contour part inside the whole slide image.
    """
```

1.5 cnt_inside_ratio

```
def cnt_inside_ratio(cnt_arr1, cnt_arr2): """ Calculate the ratio between intersection part of cnt_arr1 and cnt_arr2
to cnt_arr1.
"""
```

1.6 contour_patch_splitting_no_overlap

```
def contour_patch_splitting_no_overlap(cnt_arr, wsi_h, wsi_w,
    patch_size=299, inside_ratio=0.75):
    """ Splitting contour into patches with no overlapping between patches.
    """
```

1.7 contour_patch_splitting_self_overlap

```
def contour_patch_splitting_self_overlap(cnt_arr, patch_size=299, inside_ratio=0.75): """ Splitting contour into
patches with both start and end meeting, with overlapping among patches.
"""
```

1.8 contour_patch_splitting_half_overlap

```
def contour_patch_splitting_half_overlap(cnt_arr, wsi_h, wsi_w,
    patch_size=448, inside_ratio=0.75):
    """ Splitting patches with half overlap between patches.
    """
```


2.1 wsi_coor_splitting

```
def wsi_coor_splitting(wsi_h, wsi_w, length, overlap_flag=True): """ Spltting whole slide image to starting coordinates.
    """
```

2.2 wsi_patch_splitting

```
def wsi_patch_splitting(wsi_path, patch_dir, patch_size=299, save_size=299,
                        wsi_ext="tiff", save_ext="png", pyramid_flag=True, overlap_flag=True, level=0):
    """ Spltting whole slide image to image patches.
    """
```

2.3 mean_patch_val

```
def mean_patch_val(img): """ Mean pixel value of the patch.
    """
```

2.4 std_patch_val

```
def std_patch_val(img): """ Standard deviation of pixel values in the patch.
    """
```

2.5 patch_bk_ratio

`def patch_bk_ratio(img, bk_thresh=0.80):` `"""` Calculate the ratio of background in the image
`"""`

3.1 create_pyramidal_img

```
def create_pyramidal_img(img_path, save_dir): """ Convert normal image to pyramidal image.
    """
```

3.2 load_wsi_head

```
def load_wsi_head(wsi_img_path): """ Load the header meta data of whole slide pyramidal image.
    """
```

3.3 load_wsi_level_img

```
def load_wsi_level_img(wsi_img_path, level=0): """ Load the image from specified level of the whole slide image.
    """
```


CHAPTER 4

About pyslide

`pyslide` is written for whole slide pathology image automatic analysis. We would like to include as much as general utilities for whole slide image analysis. [Pull Request](#) and [Issue](#) are very welcome!