image_mosaic_generator

Douglas Dohmeyer

```
usage: __main__.py [-h] [-i INPUT_IMAGE] [-t IMAGE_TABLE] [-o OUTPUT_IM-
AGE] [-d IMAGE_DIRECTORY] [-hxw TILE_DIMENSIONS] [-S SCALING_FACTOR]
```

optional arguments:

`-h, --help`

show this help message and exit

`-i INPUT_IMAGE, --input_image INPUT_IMAGE`

The source image.

`-t IMAGE_TABLE, --image_table IMAGE_TABLE`

The image source table to use for generating the output image.

`-o OUTPUT_IMAGE, --output_image OUTPUT_IMAGE`

The path where the output image will be put.

`-d IMAGE_DIRECTORY, --image_directory IMAGE_DIRECTORY`

The directory under which images will be searched. This will generate a .csv file with the same name as the directory on which you've run the utility.This resultant csv will be your image_table to be used in generating mosaics.Currently, the search algorithm will match only files with one of the following extensions tif, tiff, png, bmp, jpg, and jpeg. It will search under the given directory and all sub-directories.

`-hxw TILE_DIMENSIONS, --tile_dimensions TILE_DIMENSIONS`

The width and height (in pixels) of each tile in the mosaic. This should be represented as "HxW" where W is the width and H is the height (e.g. 640x480).Larger dimensions result in larger mosaic tiles while smaller dimensions result in smaller mosaic tiles.

`-S SCALING_FACTOR, --scaling_factor SCALING_FACTOR`

The multiple by which the input image will be re-sized (this is applied to both x and y axies). So, a scaling_factor of 0.5 will make both the x and y axies of the resultant image half the length of the input hence the resultant image will be one quarter of the area of the input image. The same applies for scaling_factors greater than 1 except the resultan image will be larger. This is especially useful for smaller images.

To generate your source image table, simply run the program using the `-d` flag specifying the source directory where the images from under which will be used to generate this table. After generating the source table, the program will exit.

The image table is required for generating an image mosaic. Moreover, take care not to move the source images after generating your table. The paths given in the image table tell the program where to find a particular image to be used in your new creation and this utility will not know where you've put it until the table is regenerated.

It is also possible to manually alter the image table to exclude images you don’t want in your mosaic. Simply delete the row with the unwanted image and it will be as if it never existed.