Supplement S3 File

January 31, 2019

1 Supplement S1 File

1.1 S1 File. Tile images for training.

```
In [ ]:  ##################################################################
         ### This script is used to tile images into smaller images for
         ### ease of use within the process
         ### Use example:
         ### python gen_training_patches.py --root home/test_imagery
         ### --step 32 --size 32 --output home/tiled_out
         ### You can set the step size (# of pixels between the beginning
         ### of one image and the next), and size (the # of pixels in an
         ### image). Combined these give you how many tiles will be created
         ### and the degree of overlap between them. If step and size are
         ###the same, there will be no overlap. If step is less than size,
         ### there will be overlap. If step is greater than size, there
         ### will be gaps between the tiles that are ignored.
         import numpy as np
         from PIL import Image
         import time
         import torch
         import os.path
         import argparse
         from scipy import misc
         from m_util import *


         s = spacewhale()

         parse = argparse.ArgumentParser()
         parse.add_argument('--root',type=str,default='./Water_Training')
         parse.add_argument('--step',type=int,default=500)
         parse.add_argument('--size',type=int,default=30)
         parse.add_argument('--output',type=str,default='./water')
         opt = parse.parse_args()
         opt.im_fold = opt.root
         opt.results = opt.output
```

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```python
s.sdmkdir(opt.results)
opt.input_nc =3
imlist=[]
imnamelist=[]

for root,_,fnames in sorted(os.walk(opt.root)):
    for fname in fnames:
        if fname.lower().endswith('.png'):
            path = os.path.join(root,fname)
            imlist.append((path,fname))
            imnamelist.append(fname)

for im_path,imname in  imlist:
    png = misc.imread(im_path,mode='RGB')
    w,h,z = png.shape

    s.savepatch_train(png,w,h,opt.step,opt.size,opt.results+'/'+imname[:-4]+'#')
```