README

Organization

- Main.py includes main function.

- Utils.py includes some helper function.

- Match.py includes two matching algorithm.

As explained in report, there are 4 jupyter notebooks for different images.

- Part1 contains: Identity filter image, blur filter image, texture transfer with k=1, super-resolution flower image, re-color image.

- Part2 contains: Artistic filter evening skyline image with k=0.5, luminance remap off and on. Artistic filter flower and leaves image.

- Part3 contains: Texture transfer with k=0.5, failed super-resolution fluff image. Texture-by-number image.

- Part4 contains: Artistic filter evening skyline image with k=5, 20. Failed artistic shore image. Artistic filter sunset image with k=2, 0.5.

To run the code

Install these packages:

- "matplotlib" for image display.

- "cv2" for reading and converting images between different color spaces.

- "numpy" for computation.

- "imageio" for write image onto disks.

- "pyflann" for ANN search algorithm.

Then run the jupyter notebooks.

Generating a image usually takes about 2 hours, so **clear outputs only when necessary**.