README.md 2025-04-07

Pipeline for Stereoscopic stitching work

- 1. Visualize the matches from superpoint+lightglue, learn the matches and points from the results;\
 - 1. Extract points and matches from results
- 2. Visualize the results from segmentation, learn the results and how to extract regions;\
 - 1. Extract semantic region mask from SAM2's results
 - 2. Make a class:Region to store region mask and points inside
- 3. Match points to semantic region, build class to save them;

1.

- 4. Learn how to use points to controll image warping;\
- 5. Learn DLT/MDLT to estimate optimal homography;\
- 6. Learn DLT to solve energy minimization problem, write class to realize with Homography, Disparity, smoothness;\
- 7. Stereo Stitching;\

Using StereoscoPy to Generate Red-Cyan stereoscopic pairs

install: pip install stereoscopy

CIL: StereoscoPy -S 5 0 -a -m color --cs red-cyan --lc rgb imgs_ss/11040035_l.png imgs_ss/11040035_r.png results/anaglyph_color_rc.jpg

- -A: autoalignment(should be off)
- -a: anaglyph output
- -S: xy shift for left/right image
- -m: method
- -cs: color scheme (should be red-cyan)
- --lc: luma coding (should be rgb)