Intro

Stereo image correspondences using Fundamental matrix.

Custom Functions are defined in `src/src.py`

Look at `src/` for all the code.

Run `src/demo.py` to get the resulting transformations in `result/`.

Note: To have a look at the precompiled results have a look in `saved_result/`.

Requirements

```
python 3.7.0
opencv-python 3.4.2.16
opencv-contrib-python 3.4.2.16
numpy 1.15.2
matplotlib 3.0.0
```

Details

- I allow setting a variable `width_epipolar` to make the line thicker on which we want to find the correspondences.
- I have used `lowe's ratio` in finding good keypoint matches as it increases the reliability of the key point matches between images.
- I take in a variable `method` that can be set to `SIFT`, `local`

telling which descriptor to use. `local` here refers to the local 3x3 patch of RGB or LAB values.

- I have used **SIFT** key points to match the points on an epipolar line as they seemed to give the best results.

Results

Reconstructed images,

 paramters used: discriptor: `'sift'` | width: `112` | lowsR: `0.70` | width_epipolar: `3`

 paramters used: discriptor: `'sift'` | width: `112` | lowsR: `0.75` | width_epipolar: `3`

 paramters used: discriptor: `'sift'` | width: `200` | lowsR: `0.70` | width_epipolar: `3`
