

ADIPCV-2019 ASSIGNMENT-4
/* Affine stereo. */

Consider a pair of images of the same scene (AF1.jpg and AF2.jpg) taken by the same affine camera from two different viewing positions (as attached with the assignment). Assume AF1.jpg is the reference image. Perform the following operations.

- (i) Form a set of pairs of corresponding points using key point extraction and feature descriptors (e.g. SIFT or SURF). You may use functions provided by the development environment for these operations. 20
- (ii) Compute Fundamental matrix using RANSAC algorithm. Compute the epipoles. 40
- (iii) Draw the epipolar lines corresponding to the key point set selected by the RANSAC. 20
- (iv) Compute 3D coordinates of the scene. 20

Submit your codes, results, a README file for running the codes and a write-up describing the implementation and observations.

For well organised reporting and coding – 10.

You may implement your programs in C++-OpenCV/MATLAB/ Python with necessary user's interfaces and visualization of your results and input.

Please provide a documentation for compiling and running the programs in a README file. The whole project should be submitted in a single tar or zip file.