

Content-Aware Unsupervised Deep Homography Estimation

Supplementary Materials

Anonymous ECCV submission

Paper ID 2503

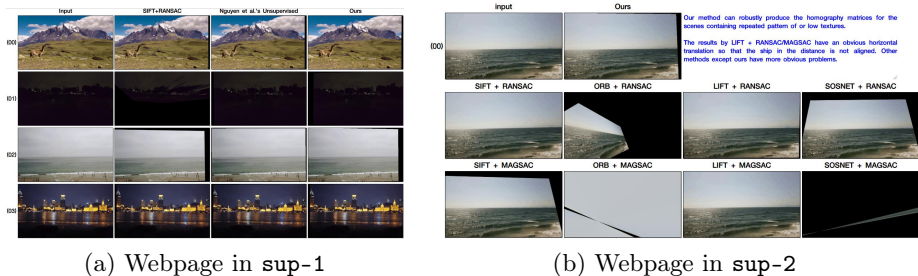


Fig. 1: Screenshots for webpages in the two directories.

We prepared two directories to present some typical results by competitive methods and ours. Screenshots are shown in Fig. 1.

Directory sup-1. We first show the comparison results by our method and one classical feature-based method, i.e. SIFT [3]+RANSAC [2], and one state-of-the-art DNN-based method [4], as seen in webpage

Click here: [./sup-1/index.html](http://sup-1/index.html).

Directory sup-2. We further show the comparison results by our method and 8 feature-based methods, combined from 4 feature descriptors [3,5,7,6] and 2 outlier rejection algorithms [2,1], as seen in webpage

Click here: [./sup-2/index.html](http://sup-2/index.html).

In sup-2, we also add some descriptions for each example for your better understanding.

References

1. Barath, D., Matas, J., Nuskova, J.: Magsac: marginalizing sample consensus. In: Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition. pp. 10197–10205 (2019) [1](#)
2. Fischler, M.A., Bolles, R.C.: Random sample consensus: a paradigm for model fitting with applications to image analysis and automated cartography. Communications of the ACM **24**(6), 381–395 (1981) [1](#)
3. Lowe, D.G.: Distinctive image features from scale-invariant keypoints. International Journal of Computer Vision **60**(2), 91–110 (2004) [1](#)
4. Nguyen, T., Chen, S.W., Shivakumar, S.S., Taylor, C.J., Kumar, V.: Unsupervised deep homography: A fast and robust homography estimation model. IEEE Robotics and Automation Letters **3**(3), 2346–2353 (2018) [1](#)
5. Rublee, E., Rabaud, V., Konolige, K., Bradski, G.R.: Orb: An efficient alternative to sift or surf. In: Proc. ICCV. vol. 11, pp. 2564–2571 (2011) [1](#)
6. Tian, Y., Yu, X., Fan, B., Wu, F., Heijnen, H., Balntas, V.: Sosnet: Second order similarity regularization for local descriptor learning. In: Proc. CVPR. pp. 11016–11025 (2019) [1](#)
7. Yi, K.M., Trulls, E., Lepetit, V., Fua, P.: Lift: Learned invariant feature transform. In: European Conference on Computer Vision. pp. 467–483. Springer (2016) [1](#)