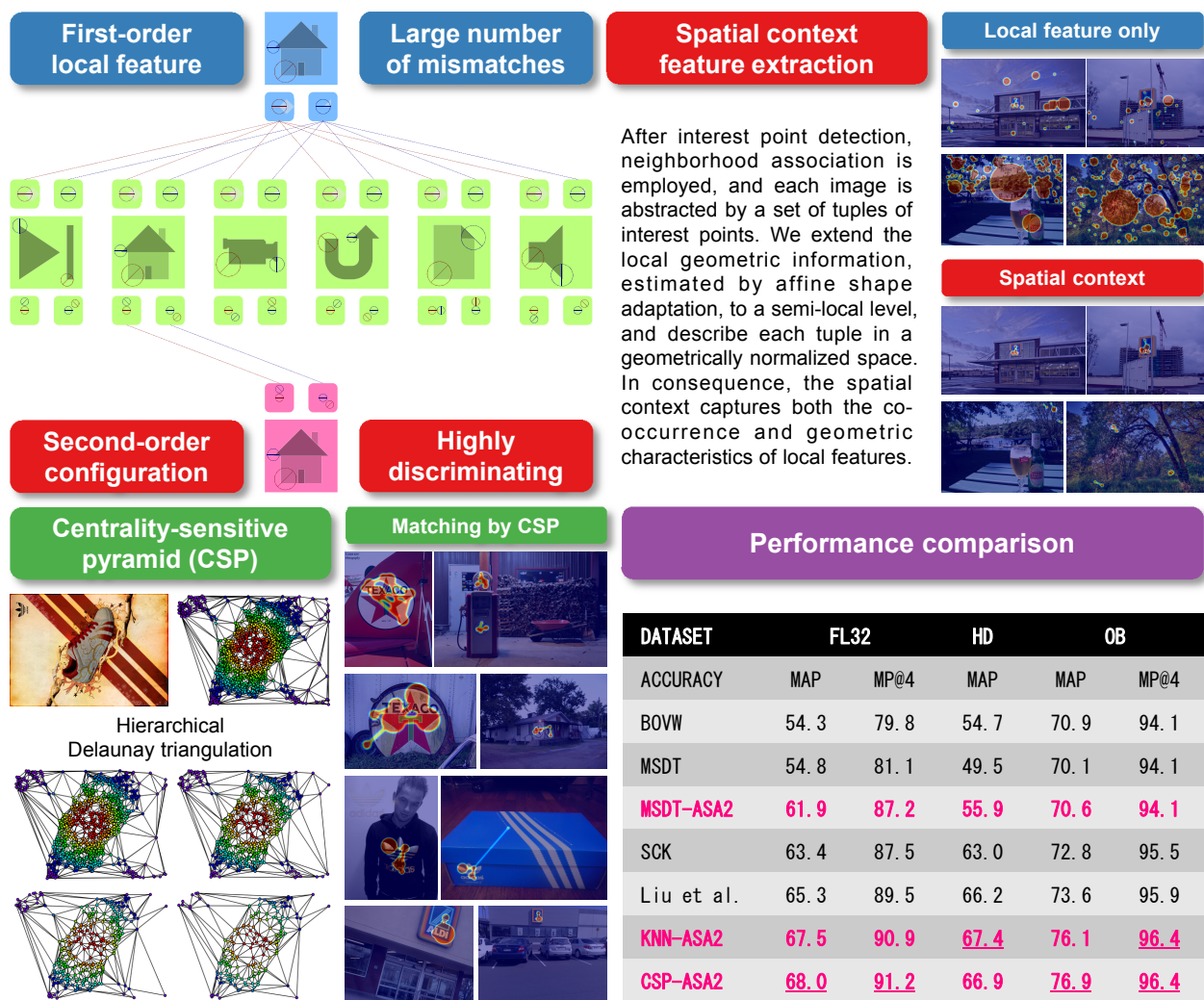


You may know the lion by its TWO claws

~Image matching based on affine-invariant spatial context~

Abstract

We propose a novel feature representation approach based on a second-order configuration of local features to support the spatially stable matching of images. The approach is designed to be **robust as regards anisotropic affine transformations** without compromising its ability to reject mismatches. We revisit affine shape adaptation and extend its conclusion to characterize the second-order geometric coherence of local features. We also propose a second approach called Centrality-Sensitive Pyramid (CSP) for **fast spatial neighborhood association**. In an experiment with the Flickr Logos 32 dataset, our approach was able to achieve the **highest accuracy yet reported** for the retrieval protocol of this dataset, which was more than 8% higher than the second highest value.



Related work

- [1] X. Wu, K. Kashino, "Image retrieval based on spatial context with relaxed Gabriel graph pyramid," in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing*, 2014.
- [2] X. Wu, K. Kashino, "Image retrieval based on anisotropic scaling and shearing invariant geometric coherence," in *Proc. The 22nd International Conference on Pattern Recognition*, 2014.

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