1 Related work

1.1 Spatial pooling descriptors

SIFT [Low04], PCA-SIFT [KS04], HOG [DT05], DPM [FMR08], GLOH [MS05], DAISY [TLF08, WHB09],

1.2 Higher order descriptors

BIF-column texture representation [CG10], $\mathcal{J}_4$-grid2 [LDDP12], Galaxy descriptor [PSSZI]

1.3 Performance evaluations

[MS05], [DAP11]

References

[CG10]   Michael Crosier and Lewis D Griffin. Using basic image features for texture classification. *International Journal of Computer Vision*, 88(3):447–460, 2010.

[DAP11]   Anders Lindbjerg Dahl, Henrik Aanæs, and Kim Steenstrup Pedersen. Finding the best feature detector-descriptor combination. In *3D Imaging, Modeling, Processing, Visualization and Transmission (3DIMPVT), 2011 International Conference on*, pages 318–325. IEEE, 2011.

[DT05]   Navneet Dalal and Bill Triggs. Histograms of oriented gradients for human detection. In *Computer Vision and Pattern Recognition, 2005. CVPR 2005. IEEE Computer Society Conference on*, volume 1, pages 886–893. IEEE, 2005.

[FMR08]   Pedro Felzenszwalb, David McAllester, and Deva Ramanan. A discriminatively trained, multiscale, deformable part model. In *Computer Vision and Pattern Recognition, 2008. CVPR 2008. IEEE Conference on*, pages 1–8. IEEE, 2008.

[KS04]   Yan Ke and R. Sukthankar. Pca-sift: a more distinctive representation for local image descriptors. In *Computer Vision and Pattern Recognition, 2004. CVPR 2004. Proceedings of the 2004 IEEE Computer Society Conference on*, volume 2, pages II–506–II–513 Vol.2, June 2004.

[LDDP12] Anders Boesen Lindbo Larsen, Sune Darkner, Anders Lindbjerg Dahl, and Kim Steenstrup Pedersen. Jet-based local image

descriptors. In *Computer Vision–ECCV 2012*, pages 638–650. Springer, 2012.

[Low04]   David G Lowe. Distinctive image features from scale-invariant keypoints. *International journal of computer vision*, 60(2):91–110, 2004.

[MS05]   Krystian Mikolajczyk and Cordelia Schmid. A performance evaluation of local descriptors. *Pattern Analysis and Machine Intelligence, IEEE Transactions on*, 27(10):1615–1630, 2005.

[PSSZI]   Kim Steenstrup Pedersen, Kristoffer Stensbo-Smidt, Andrew Zirm, and Christian Igel. Shape index descriptors applied to texture-based galaxy analysis.

[TLF08]   Engin Tola, V. Lepetit, and P. Fua. A fast local descriptor for dense matching. In *Computer Vision and Pattern Recognition, 2008. CVPR 2008. IEEE Conference on*, pages 1–8, June 2008.

[WHB09]   Simon Winder, Gang Hua, and Matthew Brown. Picking the best daisy. In *Computer Vision and Pattern Recognition, 2009. CVPR 2009. IEEE Conference on*, pages 178–185. IEEE, 2009.