

# Image Labeling on a Network: Using Social-Network Metadata for Image Classification: Supplementary Material

Anonymous ECCV submission

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Complete results for the ImageCLEF, PASCAL, MIR, and NUS datasets are shown in Figures 1–4. Weight vectors for the social network features on the ImageCLEF dataset (which were summarized in the main text) are shown in Figure 5. Complete results for tag and group prediction on the MIR dataset are shown in Figures 6 and 7 (respectively).

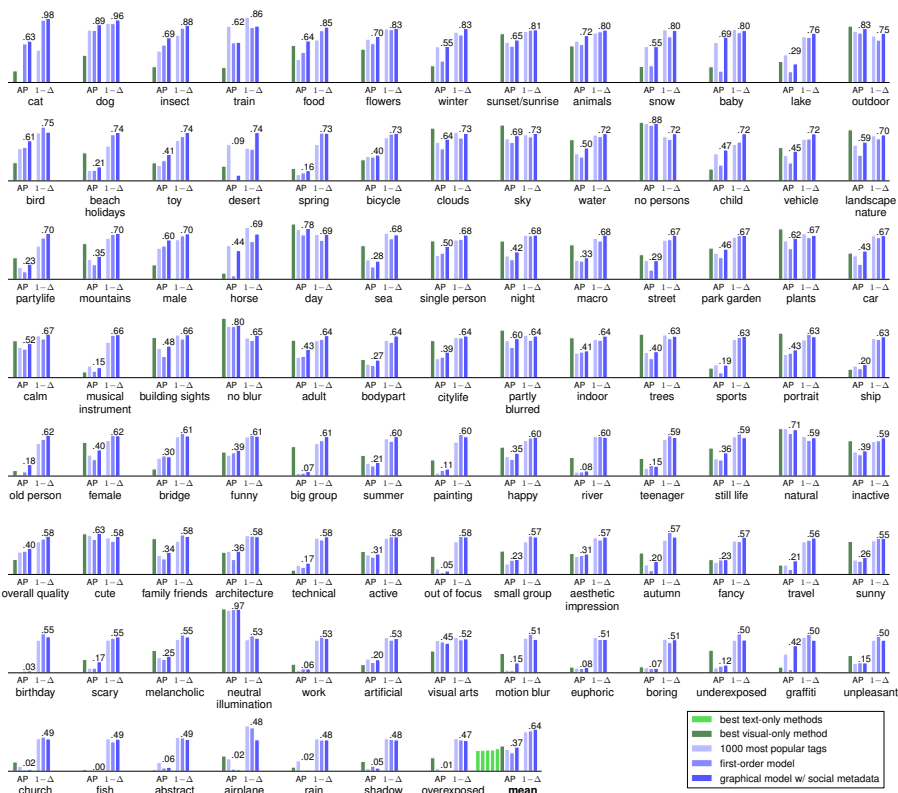
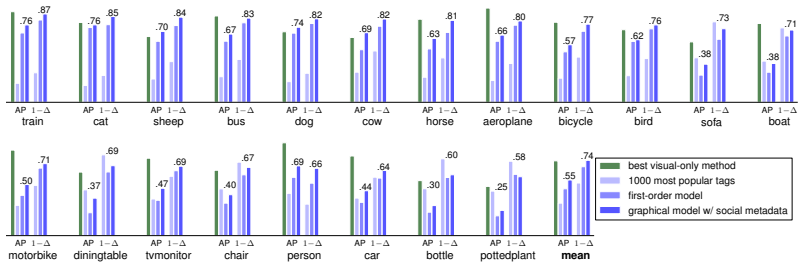
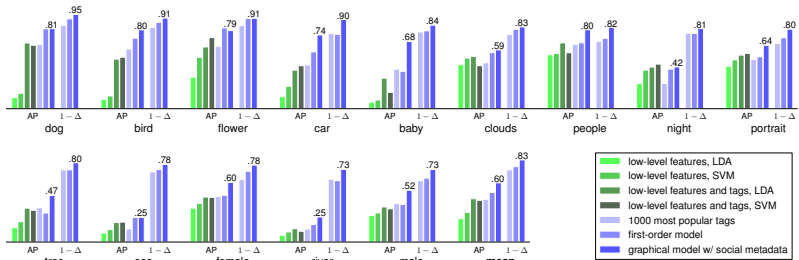


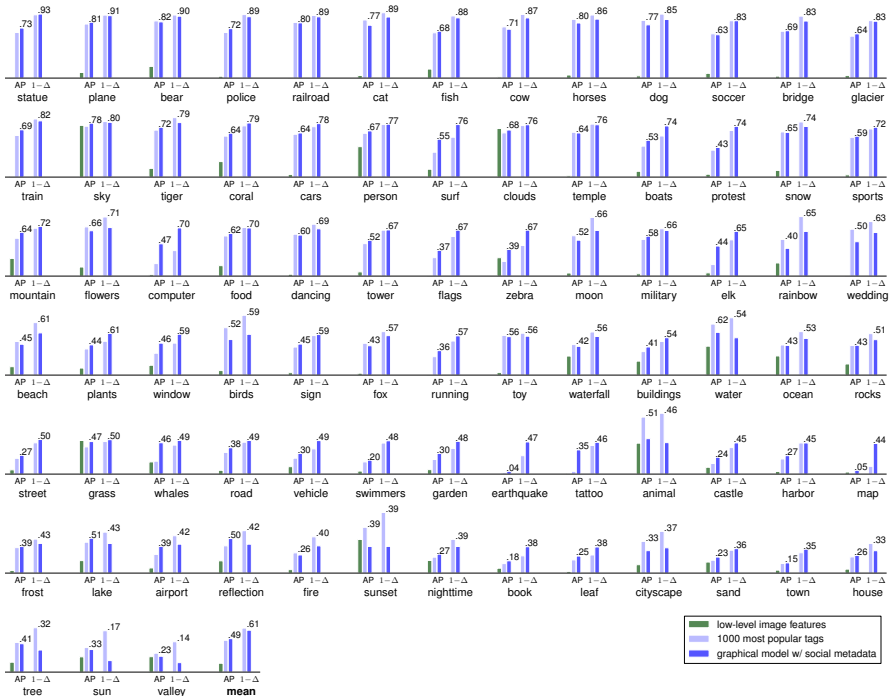
Fig. 1. Predicting labels on the ImageCLEF dataset [4].



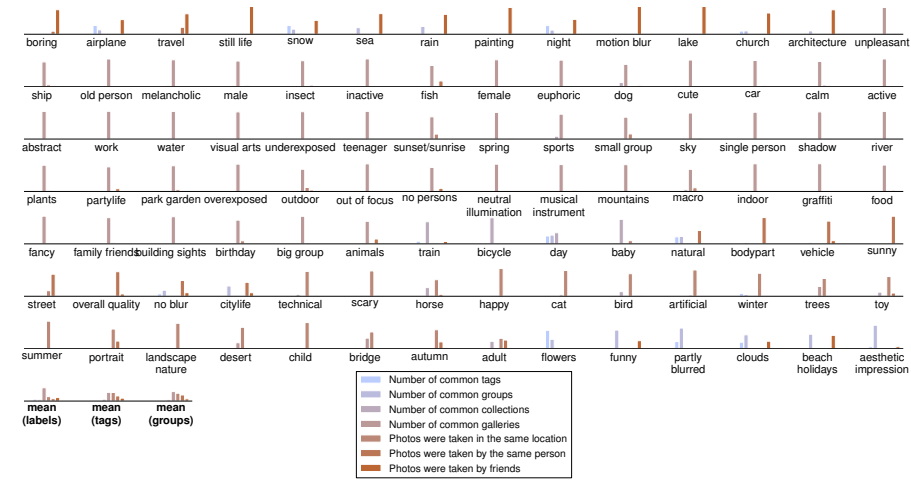
**Fig. 2.** Predicting labels on the PASCAL dataset [2].



**Fig. 3.** Predicting labels on the MIR dataset [3].



**Fig. 4.** Predicting labels on the NUS dataset [1]. The proposed method yields poor performance on this dataset, possibly due to our using only a subset of the edges, so as to fit the dataset in memory. The ‘flat’ model did not fit in memory, though with some effort this could presumably be addressed using a sparse implementation.



**Fig. 5.** Weight vectors for pairwise features across all classes in ImageCLEF. Each vector is normalized to sum to one, as the model is scale invariant. Categories are grouped according to which feature is the most prominent.

## References

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2. M. Everingham, L. Van Gool, C. K. I. Williams, J. Winn, and A. Zisserman. The PASCAL visual object classes (VOC) challenge. *IJCV*, 88(2):303–338, 2010. 2
3. M. J. Huiskes and M. S. Lew. The MIR Flickr retrieval evaluation. In *CIVR*, 2008. 2
4. S. Nowak and M. J. Huiskes. New strategies for image annotation: Overview of the photo annotation task at ImageCLEF 2010. In *CLEF (Notebook Papers/LABs/Workshops)*, 2010. 1

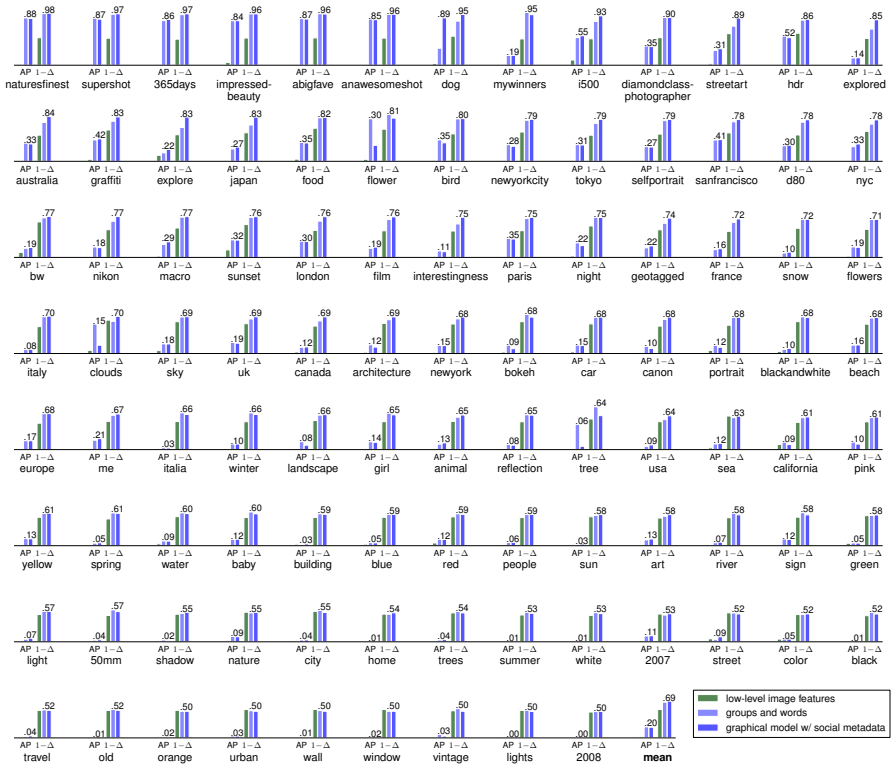


Fig. 6. Tag prediction on the MIR dataset.

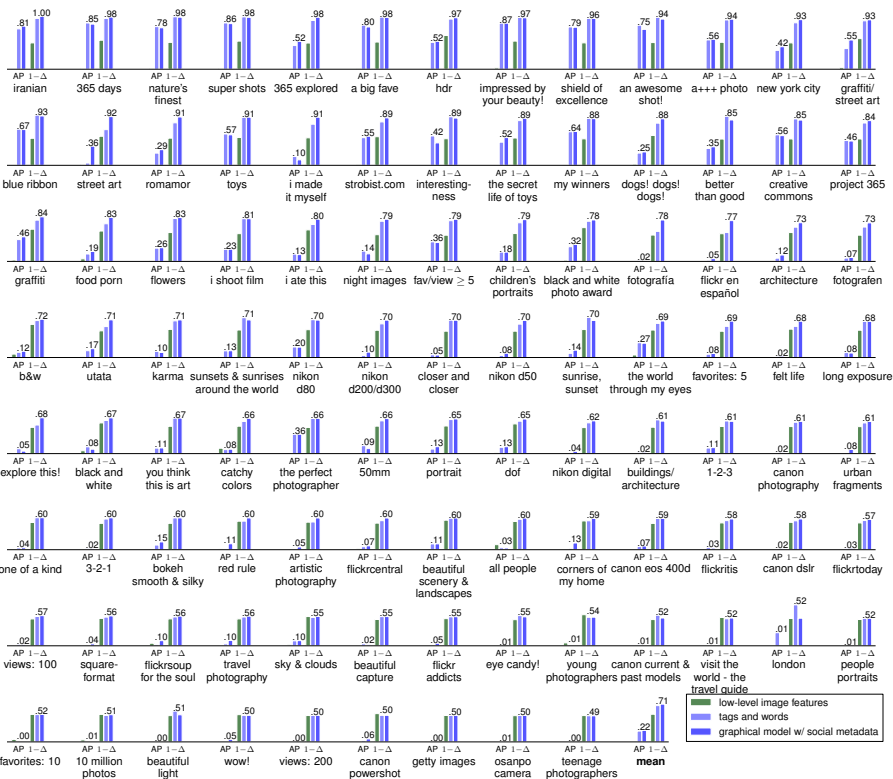


Fig. 7. Group prediction on the MIR dataset. Group names have been sanitized.