Clustering Millions of Faces By Identity

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The article was written by (Otto, Wang, and Jain 2018). It was was cited 44 times according to Google Scholar. The task performed was face clustering. They used the F-measure metric over clusters with distractor images.

Hypothesis

Evidence and Results

Dataset

Results

Contribution

A first contribution of this paper stems from an improvement of the clustering algorithm. The Rank-Order cluster proposed by (Zhu, Wen, and Sun 2011) has the disadvantage that it requires $O(n^2)$. The authors propose to use the FLANN library implementation of the randomized k-d tree algorithm to compute the list of nearest neighbors.

The network architecture is VGG16 proposed by (Simonyan and Zisserman 2014).

Weaknesses

Future Work

References

Otto, C., D. Wang, and A. K. Jain (Feb. 2018). "Clustering Millions of Faces by Identity". In: *IEEE Transactions on Pattern Analysis and Machine Intelligence* 40.2, pp. 289–303. ISSN: 0162-8828. DOI: 10.1109/TPAMI.2017.2679100.

Simonyan, Karen and Andrew Zisserman (2014). "Very Deep Convolutional Networks for Large-Scale Image Recognition". In: pp. 1–14. ISSN: 09505849. DOI: 10.1016/j.infsof.2008.09.005. arXiv: 1409.1556. URL: http://arxiv.org/abs/1409.1556.

Zhu, C., F. Wen, and J. Sun (June 2011). "A rank-order distance based clustering algorithm for face tagging". In: *CVPR 2011*, pp. 481–488. DOI: 10.1109/CVPR.2011.5995680.