Content-based retrieval of visual information

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Bibliography

[1] H. Bay, Tuytelaars T., and L. Van Gool. Surf: Speeded up robust features. In *Proceedings of the European Conference on Computer Vision (LNCS vol. 3951)*, pages 404–417. Springer, 2006.

[2] R.E. Bellman. *Dynamic programming*. Princeton University Press, Princeton, NJ, USA, 1995.

[3] M. Blighe and N.E. O'Connor. Myplaces: detecting important settings in a visual diary. In *Proceedings of the 2008 international conference on Content-based image and video retrieval*, pages 195–204, 2008.

[4] C.J.C. Burges. A tutorial on support vector machines for pattern recognition. *Data Mining and Knowledge Discovery*, 2:121–167, 1998.

[5] T.H. Chalidabhongse, K. Kim, D. Harwood, and L.S. Davis. A perturbation method for evaluating background subtraction algorithms. In *Proceeding of the Joint IEEE International Workshop on Visual Surveillance and Performance Evaluation of Tracking and Surveillance (VS-PETS)*, pages 110–116, 2003.

[6] C.-C. Chang and C.-J. Lin. LIBSVM: A library for support vector machines. *ACM Transactions on Intelligent Systems and Technology*, 2:27:1–27:27, 2011.

[7] I. Cohen, N. Sebe, A. Garg, M.S. Lew, and T.S. Huang. Facial expression recognition from video sequences. In *Proceedings of the IEEE International Conference on Multimedia and Expo (ICME'02), vol. II*, pages 121–124, 2002.

[8] A. Colombari, A. Fusiello, and V. Murino. Segmentation and tracking of multiple video objects. *Pattern Recognition*, 40:1307–1317, 2007.

[9] D. Comaniciu, V. Ramesh, and P. Meer. Kernel-based object tracking. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 25:564–577, 2003.

[10] M. Cristani, M. Bicego, and V. Murino. Integrated region- and pixel-based approach to background modelling. In *Proceedings of the IEEE Workshop on Motion and Video Computing*, pages 3–8, 2002.

[11] R. Cucchiara. Multimedia surveillance systems. In *Proceedings of the third ACM international workshop on Video surveillance & sensor networks*, pages 3–10, 2005.

[12] R. Datta, D. Joshi, J. Li, and J.Z. Wang. Image retrieval: Ideas, influences, and trends of the new age. *ACM Computing Surveys*, 40(1), April 2008.

[13] M. Egmont-Petersen, D. De Ridder, and H. Handels. Image processing with neural networks - a review. *Pattern Recognition*, 35:2279–2301, 2002.

[14] T. Ellis and M. Xu. Object detection and tracking in an open and dynamic world. In *Proceedings of Workshop on Performance Evaluation of Tracking and Surveillance*, page unnumbered, 2001.

[15] D.M. Etter. *Introduction to Matlab (2nd Edition)*. Prentice Hall, 2004.

[16] M. Flickner, H. Sawhney, W. Niblack, J. Ashley, Q. Huang, et al. Query by image and video content: the qbic system. *Computer*, 28:23–32, 1995.

[17] N. Funk. A study of the kalman filter applied to visual tracking. Technical report, University of Alberta, 2003.

[18] G. Giacinto and F. Roli. Design of effective neural network ensembles for image classification purposes. *Image and Vision Computing*, 19:699–707, 2001.

[19] B. Gloyer, H.K. Aghajan, K.-Y. Siu, and T. Kailath. Video-based freeway-monitoring system using recursive vehicle tracking. In *Proceedings of the SPIE Symposium on Electronic Imaging: Image and Video Processing*, pages 173–180, 1995.

[20] B. Han, Y. Zhu, D. Comaniciu, and L.S. Davis. Kernel-based bayesian filtering for object tracking. pages 227–234, 2005.

[21] I. Haritaoglu, D. Harwood, and L.S. Davis. W4: A real time system for detecting and tracking people. In *Proceedings of the IEEE International Conference on Automatic Face and Gesture Recognition*, pages 222–227, 1998.

[22] I. Haritaoglu, D. Harwood, and L.S. Davis. W4: Real-time surveillance of people and their activities. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 22:809–830, 2000.

[23] C. Harris and M. Stephens. A combined edge and corner detector. In *Proceedings of the 4th Alvey Vision Conference*, pages 147–151, 1988.

[24] D. Harwood, T. Ojala, M. Pietikäinen, S. Kelman., and L.S. Davis. *CAR-TR-678* - texture classification by center-symmetric auto-correlation, using kullback discrimination of distributions. Technical report, Computer Vision Laboratory, Center for Automation Research, University of Maryland, College Park, Maryland, 1993.

[25] D.-C. He, L. Wang, and J. Guibert. Texture discrimination based on an optimal utilization of texture features. *Pattern Recognition*, 21:141–146, 1988.

[26] L. He, C. Zou, L. Zhao, and D. Hu. An enhanced lbp feature based on facial expression recognition. In *Proceedings of the 27th Annual International*

Conference of the IEEE Engineering in Medicine and Biology Society, pages 3300–3303, 2005.

[27] T. Horprasert, D. Harwood, and L.S. Davis. A statistical approach for real-time robust background subtraction and shadow detection. In *Proceedings of the IEEE Frame-Rate Applications Workshop*, pages 1–19, 1999.

[28] T. Horprasert, D. Harwood, and L.S. Davis. A robust background subtraction and shadow detection. In *Proceedings of the Asian Conference on Computer Vision*, pages 983–988, 2000.

[29] T.S. Huang, S. Mehrotra, and Ramchandran K. Multimedia analysis and retrieval system (mars) project. In *Proceedings of the 33rd Annual Clinic on Library Application of Data Processing - Digital Image Access and Retrieval*, 1996.

[30] D.P. Huijsmans, S. Poles, and M.S. Lew. 2d pixel trigrams for content-based image retieval. In *Proceedings of the 1st International workshop on Image databases and Multi-Media search*, pages 139–145, 1996.

[31] M.J. Huiskes and M.S. Lew. The mir flickr retrieval evaluation. In *Proceedings of the 2008 ACM International Conference on Multimedia Information Retrieval*, pages 39–43, 2008.

[32] M.J. Huiskes, B. Thomee, and M.S. Lew. New trends and ideas in visual concept detection: the mir flickr retrieval evaluation initiative. In *Proceedings of the 2010 ACM International Conference on Multimedia Information Retrieval*, pages 527–536, 2010.

[33] H. Jin, Q. Liu, H. Lu, and X. Tong. Face detection using improved lbp under bayesian framework. In *Proceedings of the Third International Conference on Image and Graphics*, pages 306–309. IEEE computer society press, 2004.

[34] T. Joachims. Making large-scale svm learning practical. In B. Schlkopf, C. Burges, and A. Smola, editors, *Advances in Kernel Methods - Support Vector Learning*, pages 41–56. MIT Press, 1999.

[35] N. Lazarevic-McManus, J. Renno, and G. A. Jones. Performance evaluation in visual surveillance using the f-measure. In *Proceedings of the 4th ACM international workshop on Video surveillance and sensor networks*, pages 45–52, 2006.

[36] M.S. Lew. Information theoretic view-based and modular face detection. In *Proceedings of the 2nd. International Conference on Automatic Face and Gesture Recognition*, pages 198–203, 1996.

[37] M.S. Lew. Next generation web searches for visual content. *IEEE Computer*, 33:46–53, 2000.

[38] M.S. Lew, T.S. Huang, and K. Wong. Learning and feature selection in stereo matching. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 16:869–881, 1994.

[39] M.S. Lew and N. Huijsmans. Information theory and face detection. In *Proceedings of the 13th International Conference on Pattern Recognition*, pages 601–605, 1996.

[40] M.S. Lew, N. Sebe, C. Djeraba, and R. Jain. Content-based multimedia information retrieval: State of the art and challenges. *ACM Transactions on Multimedia Computing, Communications, and Applications*, 2:1–19, February 2006.

[41] J. Li and J. Wang. Real-time computerized annotation of pictures. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 30:985–1002, 2008.

[42] L. Li, W. Huang, I.Y.H. Gu, and Q. Tian. Foreground object detection from videos containing complex background. In *Proceedings of the eleventh ACM international conference on Multimedia*, pages 2–10, 2003.

[43] D.G. Lowe. Object recognition from local scale invariant features. In *Proceedings of the Seventh IEEE International Conference on Computer Vision*, pages 1150–1157, 1999.

[44] D.G. Lowe. Distinctive image features from scale-invariant keypoints. *International Journal of Computer Vision*, 60:91–110, 2004.

[45] F.J. Madrid-Cuevas, R. Medina Carnicer, M. Prieto Villegas, N.L. Fernández García, and Carmona Poyato. Simplified texture unit: A new descriptor of the local texture in gray-level images. In *Proceedings of the first Iberian conference on Pattern recognition and image analyis (LNCS2652)*, pages 470–477. Springer, 2003.

[46] T. Mäenpää, T. Ojala, M. Pietikäinen, and Soriano M. Robust texture classification by subsets of local binary patterns. In *Proceedings of the 15th international conference on pattern recognition, volume 3*, pages 3947–3950, 2000.

[47] J. Malo, J. Guttierrez, I. Epifanio, and F.J. Ferri. Perceptually weighted optical flow for motion-based segmentation in mpeg-4 paradigm. *Electronics Letters*, 36:1693–1694, 2000.

[48] C.D. Manning, P. Raghavan, and H. Schütze. *Introduction to Information Retrieval*. Cambridge University Press, 2008.

[49] S.J. McKenna, S. Jabri, Z. Duric, A. Rosenfeld, and H. Wechsler. Tracking groups of people. *Computer Vision and Image Understanding*, 80:42–56, 2000.

[50] M. Middendorf and H. Nagel. Vehicle tracking using adaptive optical flow estimation. In *Proceeding of the Workshop on Performance Evaluation of Tracking and Surveillance*, pages 42–56, 2000.

[51] K. Mikolajczyk and C. Schmid. A performance evaluation of local descriptors. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 27:1615–1630, 2005.

[52] H. Moravec. Visual mapping by a robot rover. In *Proceedings of the International Joint Conference on Artificial Intelligence*, pages 598–600, 1979.

[53] C. Motamed. Motion detection and tracking using belief indicators for video surveillance applications. In *Proceedings of the 1st IEEE Workshop on Performance Evaluation of Tracking and Surveillance (PETS2000)*, pages 58–63, 2000.

[54] W. Nam and J. Han. Motion-based background modeling for foreground segmentation. In *Proceedings of the 4th ACM international workshop on Video surveillance and sensor networks*, pages 35–44, 2006.

[55] 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)'10*, 2010.

[56] A. Oerlemans and M.S. Lew. Interest points based on maximization of distinctiveness. In *Proceeding of the 1st ACM international conference on Multimedia information retrieval*, pages 202–207, 2008.

[57] A. Oerlemans and M.S. Lew. Minimum explanation complexity for mod based visual concept detection. In *Proceedings of the international conference on Multimedia information retrieval*, pages 567–576, 2010.

[58] A. Oerlemans, M.S. Lew, and E.M. Bakker. Detecting and identifying moving objects in real-time. In *Proceedings of the Conference of the Advanced School for Computing and Imaging*, pages 358–365, 2005.

[59] V. Ogle and M. Stonebraker. Chabot: Retrieval from a relational database of images. *IEEE Computer*, 28:40–48, 1995.

[60] T. Ojala, M. Pietikäinen, and D. Harwood. A comparative study of texture measures with classification based on feature distributions. *Pattern Recognition*, 29:51–59, 1996.

[61] T. Ojala, M. Pietikäinen, and T. Mäenpää. Gray scale and rotation invariant texture classification with local binary patterns. In *Proceedings of the Sixth European Conference on Computer Vision*, pages 404–420, 2000.

[62] T. Ojala, M. Pietikäinen, and T. Mäenpää. Multiresolution gray-scale and rotation invariant texture classification with local binary patterns. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 24:971–987, 2002.

[63] S. Philipp-Foliguet, J. GONYA, and P.-H. Gosselina. Frebir: An image retrieval system based on fuzzy region matching. *Computer Vision and Image Understanding*, 113:693–707, 2009.

[64] Y. Raja and S. Gong. Sparse multiscale local binary patterns. In *Proceedings of the 17th British machine vision conference, volume II*, pages 799–808, 2006.

[65] J.J. Rocchio. Relevance feedback in information retrieval. In G. Salton, editor, *The SMART Retrieval System - Experiments in Automatic Document Processing*, pages 313–323. Prentice Hall, 1971.

[66] H. Rowley, S. Baluja, and T. Kanade. Neural network-based face detection. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 20(1):23–28, 1998.

[67] Y. Rui and T.S. Huang. *Relevance feedback techniques in image retrieval*, pages 219–258. Springer-Verlag, London, UK, 2001.

[68] Y. Rui, T.S. Huang, and S. Mehrotra. Content-based image retrieval with relevance feedback in mars. In *Proceedings of the International Conference on Image Processing, volume 2*, pages 815–818, 1997.

[69] G. Salton and C. Buckley. Improving retrieval performance by relevance feedback. *Journal of the American Society for Information Science*, 41:288–297, 1990.

[70] D. Scharstein and R. Szeliski. A taxonomy and evaluation of dense two-frame stereo correspondence algorithms. *International Journal of Computer Vision*, 47:7–42, 2002.

[71] C. Schmid, R. Mohr, and C. Bauckhage. Evaluation of interest point detectors. *International Journal of Computer Vision*, 37:151–172, 2000.

[72] N. Sebe, T. Gevers, J. van de Weijer, and S. Dijkstra. Corner detectors for affine invariant salient regions: Is colour important? In *Proceedings of the International Conference on Image and Video Retrieval*, pages 61–71, 2006.

[73] N. Sebe and M.S. Lew. Wavelet based texture classification. In *Proceedings of the 15th International Conference on Pattern Recognition (ICPR), vol III*, pages 959–962, 2000.

[74] N. Sebe and M.S. Lew. Color-based retrieval. *Pattern Recognition Letters*, 22:223–230, February 2001.

[75] N. Sebe and M.S. Lew. *Texture features for content-based retrieval*, pages 51–85. Springer-Verlag, 2001.

[76] N. Sebe and M.S. Lew. *Robust Computer Vision: Theory and Applications*. Kluwer Academic Publishers, 2003.

[77] N. Sebe, M.S. Lew, I. Cohen, Y. Sun, T. Gevers, and T.S. Huang. Authentic facial expression analysis. In *Proceedings of the International Conference on Automatic Face and Gesture Recognition (FG)*, pages 517–522, 2004.

[78] N. Sebe, M.S. Lew, and D.P. Huijsmans. Toward improved ranking metrics. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 22:1132–1143, October 2000.

[79] N. Sebe, M.S. Lew, X. Zhou, T.S. Huang, and E.M. Bakker. The state of the art in image and video retrieval. In *Proceedings of the 2nd international conference on Image and video retrieval*, pages 1–8, 2003.

[80] N. Sebe, Q. Tian, E. Loupias, M.S. Lew, and T. Huang. Evaluation of salient point techniques. *Image and Vision Computing*, 21:367–377, 2003.

[81] M. Siddiqui and G. Medioni. Robust real-time upper body limb detection and tracking. In *Proceedings of the 4th ACM international workshop on Video surveillance and sensor networks*, pages 53–60, 2006.

[82] N.T. Siebel and S. Maybank. Real-time tracking of pedestrians and vehicles. In *Proceedings of Performance Evaluation of Tracking and Surveillance PETS*, page unnumbered, 2001.

[83] A.W.M. Smeulders, M. Worring, S. Santini, A. Gupta, and R. Jain. Content-based image retrieval at the end of the early years. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 22:1349–1380, 2000.

[84] M. Srikanth, J. Varner, M. Bowden, and D. Moldovan. Exploiting ontologies for automatic image annotation. In *Proceedings of the 28th annual international ACM SIGIR conference on Research and development in information retrieval*, pages 552–558, 2005.

[85] E.J. Stollnitz, T.D. DeRose, and D.H. Salesin. Wavelets for computer graphics: A primer, part 1. *IEEE Computer Graphics and Applications*, 15:76–84, 1995.

[86] E.J. Stollnitz, T.D. DeRose, and D.H. Salesin. Wavelets for computer graphics: A primer, part 2. *IEEE Computer Graphics and Applications*, 15:75–85, 1995.

[87] M. Stricker and M. Orengo. Similarity of color images. In *Proceedings of SPIE - Storage and Retrieval of Image and Video Databases III, vol. 2*, pages 381–392, 1995.

[88] Q. Tian, N. Sebe, E. Loupias, M.S. Lew, and T.S. Huang. Content-based image retrieval using wavelet-based salient points. In *Proceedings of SPIE - Storage and Retrieval for Media Databases*, pages 425–436, 2001.

[89] L. Trujillo and G. Olague. Using evolution to learn how to perform interest point detection. In *Proceeding of the 18th International Conference on Pattern Recognition*, pages 211–214, 2006.

[90] V.N. Vapnik. *The Nature of Statistical Learning Theory*. Springer, 1995.

[91] R.C. Veltkamp and M. Tanase. A survey of content-based retrieval systems. In O. Marques and B. Furht, editors, *Content-Based Image and Video Retrieval*, pages 47–101. Kluwer, 2002.

[92] J.S. Walker. *A Primer on Wavelets and their Scientific Applications, Second Edition*. Chapman & Hall, London, 2008.

[93] L. Wang and D.-C. He. Texture classification using texture spectrum. *Pattern recognition*, 23:905–910, 1990.

[94] Q. Xiong and C. Jaynes. Multi-resolution background modeling of dynamic scenes using weighted match filters. In *Proceedings of the ACM 2nd international workshop on Video surveillance & sensor networks*, pages 88–96, 2004.

[95] M.-S. Yang, D.J. Kriegman, and N. Ahuja. Detecting faces in images: A survey. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 24(1):34–58, 2002.

[96] A. Yilmaz, O. Javed, and M. Shah. Object tracking: A survey. *ACM Computing Surveys*, 38, December 2006.

[97] J. Yu, J. Amores, N. Sebe, P. Radeva, and Q. Tian. Distance learning for similarity estimation. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 30:451–462, 2008.

[98] G.P. Zhang. Neural networks for classification: a survey. *IEEE Transactions on Systems, Man and Cybernetics*, 30:451–462, 2000.