

## Reference List

- [1] C.E Barateiro, “Industrial Internet of Things and Automation for Process Control: Pursing the Operational Excellence,” *Rio Oil & Gas Expo and Conference 2018*, Available at:  
[https://www.academia.edu/37718722/4.0\\_INDUSTRIAL\\_INTERNET\\_OF\\_THINGS\\_AND\\_AUTOMATION\\_FOR\\_PROCESS\\_CONTROL\\_PURSING\\_THE\\_OPERATIONAL\\_EXCELENCE?auto=download](https://www.academia.edu/37718722/4.0_INDUSTRIAL_INTERNET_OF_THINGS_AND_AUTOMATION_FOR_PROCESS_CONTROL_PURSING_THE_OPERATIONAL_EXCELENCE?auto=download)
- [2] iQor, Consumer Electronics. Available at:  
<https://www.iqor.com/industries/consumer-electronics>, Accessed on 12 December 2018
- [3] J. Brooks and L. Brooks, “Automation in the medical field,” *IEEE Engineering in Medicine and Biology Magazine*, Vol. 17, no. 4, P. 76, July-Aug. 1998.
- [4] S. Tavagad, S. Bhosale, A. P Singh and D. Kumar, “Survey Paper on Smart Surveillance System,” *International Research Journal of Engineering and Technology (IRJET)*, Vol. 3, no. 2, Feb. 2016
- [5] Japan Unix and Soldering Robotic Systems, Available at:  
<https://www.japanunix.com/en/products/automation/>, Accessed on 22 June 2013
- [6] Kurtz Ersa and Wave Soldering Systems, Available at:  
<https://www.kurtzersa.com/electronics-production-equipment/soldering-machines/wave-soldering-systems/produkt-details/powerflow-air-1.html>, Accessed on 09 May 2013
- [7] Nordson, Selective Soldering Systems, Available at:  
<http://www.nordson.com/en/divisions/select/products/selective-soldering-systems?con=t>, Accessed on 12 June 2013
- [8] T. C Chang and R. A Wysk, “Computer-Aided Manufacturing”, *Association for Computer Machinery*, 1997
- [9] K. Mitzner, “Introduction to PCB Design and CAD,” *Complete PCB Design Using OrCAD Capture and PCB Editor*, pp. 1-13, Dec. 2009
- [10] Unitechnologies, Microflame Soldering Technology, Available at:  
<https://unitechnologies.com/en/product/microflame/>, Accessed on 28 December 2018
- [11] Fancort Industries Inc., Laser Soldering, Available at:  
<https://fancort.com/Products/Robotic-Soldering/Laser-Soldering.aspx>, Accessed on 28 December 2018

- [12] N. S. S Mar, Masters by Research dissertation, “Vision-based Classification of Solder Joint Defects,” School of Engineering Systems, Queensland University of Technology, Brisbane, Australia , 2010.
- [13] T. Y Ong, Z. Samad and M. M Ratnam, “Solder joint inspection with multi-angle imaging and an artificial neural network,” *International Journal of Advanced Manufacturing Technology*, vol. 38, no. (5-6), pp. 455-462, Aug. 2008.
- [14] Kuk Won Ko and Hyung Suck Cho, “Solder Joints Inspection Using a Neural Network and Fuzzy Rule-Based Classification Method”, *IEEE Transactions on Electronics Packaging Manufacturing*, vol. 23, no. 2, Apr. 2000
- [15] IPC. 2014. IPC. Available at: <http://shop.ipc.org/IPC-A-610F-English-P>, Accessed on 15 April 2015
- [16] IPC, Association Collecting Electronics Industries, <http://www.ipc.org/ContentPage.aspx?pageid=J-STD-001>, Accessed 05 May 2016
- [17] Direct Industry, SMT pick-and-place machine, Available at: <http://www.directindustry.com/industrial-manufacturer/smt-pick-and-place-machine-210849.html>, Accessed on 28 December 2018
- [18] SPEA, Flying Probe Testers, Available at: <http://www.spea.com/BoardTest/ProductsbyFunction/FlyingProbeTesters/tabid/426/1anguaje/en-US/Default.aspx>, Accessed on 28 December 2018
- [19] Yush Electronic Technology CO.Ltd, Available at: <http://www.hk-yush.com>, Accessed on 28 December 2018
- [20] R. Katukam and P. Sindhoora, “Image Comparison Methods & Tools: A Review,” *National Conference on, Emerging Trends in Information Technology[ETIT]*, 28<sup>th</sup> December 2015, pp. 35-42
- [21] R. Brunelli, “Template Matching Techniques in Computer Vision- Theory and Practice,” *WILEY*, 2009
- [22] N. Perveen, D. Kumar and I. Bhardwaj, “An Overview on Template Matching Methodologies and its Applications,” *International Journal of Research in Computer and Communication Technology*, Vol. 2, no. 10, Oct. 2013

- [23] A. Banharnsakun and S. Thanathong, "Object detection based on template matching through use of best-so-far ABC," *Journal of Computer Intelligence and Neuroscience*, Vol. 2014, no. 7, Jan. 2014
- [24] L. Lamberti, M. T Ling and C. Ferlong et. Al," Advancement of Optical Methods & Digital Image Correlation in Experimental Mechanics," *Springer Proceedings of Annual Conference on Experimental and Applied Mechanics*, Vol. 3, 2018
- [25] G. Bradski and A. Kaehler, "Learning OpenCV," *O'Reilly*, Oct. 2008
- [26] A. Aichert, "Feature Extraction Techniques", *CAMP Medical Seminar WS0708*, 9 Jan. 2008
- [27] T. Kadir and M. Brady," Saliency, Scale and Image Description," *International Journal of Computer Vision*, Vol. 45, no. 2, pp. 83-105, Nov. 2001
- [28] M. Bicego, A. Lagorio, E. Grosso and M. Tistarelli, "On the Use of SIFT Features for Face Authentication," *Conference on Computer Vision and Pattern Recognition Workshop (CVPRW'06)*, 17-22 Jun. 2006, DOI: <https://ieeexplore.ieee.org/document/1640475>
- [29] D.G. Lowe," Distinctive Image Features from Scale-Invariant Keypoints," *International Journal of Computer Vision*, vol. 60, no. 2, pp. 91-110, Nov. 2004
- [30] E. Oyallon and J. Rabin, "An Analysis of the SURF Method," *IPOL Journal*, vol. 5, pp. 176-218, Jul. 2015
- [31] H. Bay, T. Tuytelaars and L. V. Gool, "SURF: Speeded Up Robust Features," *European Conference on Computer Vision*, vol. 3951, pp. 404-417, 2006
- [32] E. Rosten and T. Drummond, "Machine Learning for High-Speed Corner Detection," *European Conference on Computer Vision*, Springer, vol. 3951, pp. 430-443, DOI: [https://doi.org/10.1007/11744023\\_34](https://doi.org/10.1007/11744023_34)
- [33] H. Abdi and L. J Williams, "Principal component analysis," *Wiley Interdisciplinary Reviews: Computational Statistics*, vol. 2, no. 4, pp. 433-459, 15 Jul. 2010
- [34] A. Hyvarinen and E. Oja, "Independent component analysis: algorithms and applications," *ELSEVIER- Neural Networks*, vol. 13, no. 4-5, pp. 411-430, Jun. 2000
- [35] G. E. Sotak and K. L. Boyer, "The laplacian-of-gaussian kernel: A formal analysis and design procedure for fast, accurate convolution and full-frame output," *ELSEVIER:*

*Computer Vision, Graphics, and Image Processing*, vol. 48, no. 2, pp. 147-189, Nov. 1989

- [36] Y. Xiaoxia, W.H Brian, H. Jing, Z. Yanchun and A. Derek, “Accurate Image Analysis of the Retina Using Hessian Matrix and Binarisation of Thresholded Entropy with Application of Texture Mapping”, *PLOS*, April 2014, DOI: <https://doi.org/10.1371/journal.pone.0095943>
- [37] B. S.Morse, “Differential Geometry”, Lecture 11, Brigham Young University 1998-2000
- [38] D. E. Brown, The Hessian matrix: Eigenvalues, concavity, and curvature, *BYU Idaho Dept. of Mathematics*, April 2014
- [39] M. Calonder, V. Lepetit, C. Strecha and P. Fua, “BRIEF: Binary Robust Independent Elementary Features”, *CVLab, EPFL*, Lausanne, Switzerland
- [40] H.D Heng, X.H Jiang and Y. Sun et.al,” Color image segmentation: advances and prospects,” *ELSEVIER- Pattern Recognition*, vol. 34, no. 12, pp. 2259-2281, Dec. 2001
- [41] N. A. Ibraheem, M. M. Hassan, R. Z. Khan and P. K. Mishra, “Understanding Color Models: A Review,” *ARPN Journal of Science and Technology*, vol. 2, no. 3, Apr. 2012
- [42] T. S. Peng and C. S. Fuh, “Color-based Printed Circuit Board Solder Segmentation,” Dept. of Computer Science and Information Engineering, National Taiwan University
- [43] Y. Akbulut, Y. Guo, A. Sengur and M. Aslan, “An effective color texture image segmentation algorithm based on hermite transform,” *ELSEVIER- Applied Soft Computing*, vol. 67, pp. 494-504, 13 Mar. 2018, DOI: <https://doi.org/10.1016/j.asoc.2018.03.018>
- [44] Y. Delignon, A. Marzouki and W. Pieczynski, “Estimation of generalized mixtures and its application in image segmentation,” *IEEE Transactions on Image Processing*, vol. 6, no. 10, pp. 1364-1375, Oct. 1997
- [45] J. Smolka, “Watershed based region growing algorithm,” *Annales Universitatis Mariae Curie-Skłodowska, Sectio AI, Informatica*, vol. 3, pp. 169-178, 2005

- [46] J. Zhang, J. Zheng and J. Cai, "A diffusion approach to seeded image segmentation", *IEEE Computer Society Conference on Computer Vision and Pattern Recognition*, 13-18 Jun. 2010, DOI: <https://ieeexplore.ieee.org/document/5539891>
- [47] W.H Elmasry, H.M Mofta, N. EI-Bendary and A.E Hassanien, "Graph Partitioning based Automatic Segmentation Approach for CT Scan Liver Images," *IEEE Federated Conference on Computer Science and Information Systems*, pp.205-208, 2012
- [48] M. Borsotti, P. Campadelli and R. Schettini, "Quantitative evaluation of color image segmentation results," vol. 19, no. 8, pp. 741-747, Jun. 1998
- [49] T. Kanungo and D.M Mount et.al, "An Efficient k-Means Clustering Algorithm: Analysis and Implementation," *IEEE Transactions on Pattern Analysis & Machine Intelligence*, vol. 24, no. 7, pp. 881-892, Jul. 2002
- [50] J. Qi, Y. Yu and L. Wang, "An effective and efficient hierarchical k-means clustering algorithm", *International Journal of International Sensor Networks*, 31 Aug. 1017, DOI: <https://doi.org/10.1177/1550147717728627>
- [51] S. S. Khan and A. Ahmed, "Cluster center initialization algorithm for k-means clustering", *ELSEVIER Pattern Recognition Letters*, vol. 25, no. 11, pp.1293-1302, Aug. 2004
- [52] R. Jin, A. Goswami and G. Agrawal, "Fast and exact out-of-core and distributed k-means clustering", *Springer Link: Knowledge and Information Systems*, vol. 10, no. 1, pp. 17-40, Jul. 2006
- [53] J.C Bezdek, R. Ehrlich and W. Full, "FCM: The fuzzy c-means clustering algorithm," *ELSEVIER: Computers & Geosciences*, vol. 10, no. 2-3, pp. 191-203, 1984
- [54] N. R. Pal, K. Pal, J. M. Keller and J. C. Bezdek, "A possibilistic fuzzy c-means clustering algorithm", *IEEE Transactions on Fuzzy Systems*, vol. 13, no. 4, pp.517-530, Aug. 2005
- [55] K. S. Chuang, H. L. Tzeng, S. Chen, J. Wu and T. J. Chen, "Fuzzy c-means clustering with spatial information for image segmentation", *ELSEVIER Computerized Medical Imaging and Graphics*, vol. 30, no. 1, pp.9-15, Jan. 2006
- [56] D. Comaniciu and P. Meer, "Mean shift analysis and applications," *Proceedings of the Seventh IEEE International Conference on Computer Vision*, 20-27 Sept. 1999, DOI: <https://doi.org/10.1109/ICCV.1999.790416>

- [57] J. Bruce, T. Balch and M. Veloso, “Fast and inexpensive color image segmentation for interactive robots,” *Proceedings. 2000 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2000)* (Cat. No.00CH37113), 31 Oct. 5-Nov. 2000, DOI: <https://ieeexplore.ieee.org/document/895274>
- [58] P. F. Felzenszwalb and D. P. Huttenlocher, “Efficient Graph-Based Image Segmentation,” *International Journal of Computer Vision*, vol. 59, no. 2, pp. 167-181, Sep. 2004
- [59] J. Ning, L. Zhang, D. Zhang and C. Wu, “Interactive image segmentation by maximal similarity based region merging”, *ELSEVIER Pattern Recognition*, vol. 43, no. 2, pp. 445-456, Feb. 2010
- [60] Y. Boykov and G. Funka-Lea, “Graph Cuts and Efficient N-D Image Segmentation”, *Springer Link: International Journal of Computer Vision*, vol. 70, no. 2, pp.109-131, Nov. 2006
- [61] N. Xu, N. Ahuja and R. Bansal, “Objects segmentation using graph cut based active contours”, *ELSEVIER Computer Vision and Image Understanding*, vol. 107, no. 3, pp. 210-224, Sep. 2007
- [62] N. Broutin, L. Devroye and E. Mcleish, “Note on the Structure of Kruskal’s Algorithm,” *ELSEVIER: Algorithmica*, vol. 56, no. 141, 2010, DOI: <https://doi.org/10.1007/s00453-008-9164-4>
- [63] A. Mariano and D. Lee et.al, “Hardware and Software Implementations of Prim’s Algorithm for Efficient Minimum Spanning Tree Computation,” *Springer: Embedded Systems: Design, Analysis and Verification*, vol. 403, 2013, DOI: [https://doi.org/10.1007/978-3-642-38853-8\\_14](https://doi.org/10.1007/978-3-642-38853-8_14)
- [64] Peter Corke, ENB339 lecture 9: Image geometry and planar homography, 2012. Accessed on: Dec. 20, 2020. [Streaming Video]. Available: [www.Youtube.com](http://www.Youtube.com)
- [65] G. G. L Priya and S. Dominic, “Video cut detection using block based histogram differences in RGB color space”, *International Conference on Signal and Image Processing*, 15-17 Dec. 2010, DOI: <https://ieeexplore.ieee.org/document/5697436>
- [66] Z. Xu, X. Liu and N. Ji, “Fog Removal from Color Images using Contrast Limited Adaptive Histogram Equalization”, *IEEE 2009 2<sup>nd</sup> International Congress on Image and Signal Processing*, 17-19 Oct. 2009, DOI: <https://ieeexplore.ieee.org/document/5301485>

- [67] W. Jia, H. Zhang, X. He and Q. Wu, "Refined Gaussian Weighted Histogram Intersection and Its Application in Number Plate Categorization", *IEEE International Conference on Computer Graphics, Imaging and Visualisation*, 26-28 Jul. 2006, DOI: <https://ieeexplore.ieee.org/document/1663800>
- [68] Z. Zivkovic and F. V. D. Heijden, "Efficient adaptive density estimation per image pixel for the task of background subtraction", *ELSEVIER Pattern Recognition Letters*, vol. 27, no. 7, pp.773-780, May 2006
- [69] N. A. Mandellos, I. Keramitsoglou and C. T. Kiranoudis, "A background subtraction algorithm for detecting and tracking vehicles", *ELSEVIER Expert Systems with Applications*, vol. 38, no. 3, pp. 1619-1631, Mar. 2011
- [70] K. Kim, T. H. Chalidabhongse, D. Harwood and L. Davis, "Background modeling and subtraction by codebook construction", *IEEE International Conference on Image Processing*, 2004
- [71] A. Graves, A. R. Mohamed and G. Hinton, "Speech recognition with deep recurrent neural networks", *IEEE International Conference on Acoustic, Speech and Signal Processing*, 26-31 May 2013, DOI: <https://ieeexplore.ieee.org/document/6638947>
- [72] L. A. Gatys, A. S. Ecker and M. Bethge, "Image Style Transfer Using Convolutional Neural Networks", *IEEE Conference on Computer Vision and Pattern Recognition*, 2016, pp. 2414-2423
- [73] O. Ronneberger, P. Fischer and T. Brox, "U-Net: Convolutional Networks for Biomedical Image Segmentation", *Springer Link International Conference on Medical Image Computing and Computer Assisted Intervention*, pp. 234-241, 18 NOV. 2015
- [74] G. Levi and T. Hassner, "Age and Gender Classification Using Convolutional Neural Networks", *IEEE Conference on Computer Vision and Pattern Recognition Workshops*, pp. 34-42, 2015
- [75] S. C. Huang, F. C. Cheng and Y. S. Chiu, "Efficient Contrast Enhancement Using Adaptive Gamma Correction With Weighting Distribution", *IEEE Transactions on Image Processing*, vol. 22, no. 3, pp. 1032-1041, Mar. 2013
- [76] H. Farid, "Blind inverse gamma correction", *IEEE Transactions on Image Processing*, vol. 10, no. 10, pp. 1428-1433, Oct. 2001

- [77] Y. T. Kim, "Contrast enhancement using brightness preserving bi-histogram equalization", *IEEE Transactions on Consumer Electronics*, vol. 43, no. 1, pp. 1-8, Feb. 1997
- [78] S. D. Chen and A. R. Ramli, "Minimum mean brightness error bi-histogram equalization in contrast enhancement", *IEEE Transactions on Consumer Electronics*, vol. 49, no. 4, pp. 1310-1319, Nov. 2003
- [79] H. Ibrahim and N. S. P. Kong, "Brightness Preserving Dynamic Histogram Equalization for Image Contrast Enhancement", *IEEE Transactions on Consumer Electronics*, vol. 53, no. 4, pp. 1752-1758, Nov. 2007