

DAFTAR PUSTAKA

- [1] Ball, L. J., Lucas, E. J., Miles, J. N. V., and Gale, A. G. "Inspection Times And The Selection Task: What Do Eye-Movements Reveal About Relevance Effects?" *Quarterly Journal of Experimental Psychology*, 56A, 1053-1077. 2003.
- [2] Just, M. A., and Carpenter, P. A. "Eye Fixations And Cognitive Processes." *Cognitive Psychology*, 8, 441-480. 1976.
- [3] Yoon, D. and Narayanan, N. H. Mental Imagery In Problem Solving: An Eye Tracking Study. In *Proceedings of the Eye Tracking Research and Applications Symposium 2004* (pp. 77-83). NY: ACM Press. 2004.
- [4] Zelinsky, G., and Sheinberg, D.. Why some search tasks take longer than others: Using eye movements to redefine reaction times. In J. M. Findlay, R. Walker, and R. W. Kentridge (Eds.), *Eye movement research: Mechanisms, processes and applications*. 1995. (pp. 325-336). North-Holland: Elsevier.
- [5] A. Poole and L. J. Ball, "Eye Tracking In Human-Computer Interaction And Usability Research: Current Status And Future Prospects," in *Encyclopedia of Human-Computer Interaction*, 2005, pp. 211–219.
- [6] D. Bruneau, M. A. Sasse, and J. McCarthy, "The Eyes Never Lie: The Use Of Eye Tracking Data In HCI Research," *Proceedings of the CHI*, vol. 2, p. 25, 2002.
- [7] C. Sharma and S. K. Dubey, "Analysis of eye tracking techniques in usability and HCI perspective," in *Computing for Sustainable Global Development (INDIACom)*, 2014 *International Conference on*, 2014, pp. 607–612.
- [8] Hauland, G. Measuring Team Situation Awareness By Means Of Eye Movement Data. In *Proceedings of HCI International 2003: Vol 3* (pp. 230-234). Mahwah, NJ: Lawrence Erlbaum Associates.
- [9] Hanson, E. Focus Of Attention And Pilot Error. In *Proceedings of the Eye Tracking Research and Applications Symposium 2000* (p. 60). 2004 NY: ACM Press.
- [10] N. Edenborough, R. Hammoud, A. Harbach, A. Ingold, B. Kisa, P. Malawey, T. Newman, G. Scharenbroch, S. Skiver, M. Smith, A. Wilhelm, G. Witt, E. Yoder, and H. Zhang, "Driver state monitor from delphi," in *Computer Vision and Pattern Recognition, 2005. CVPR 2005. IEEE Computer Society Conference on*, 2005, pp. 1206–1207.
- [11] Lohse, G. L. Consumer eye movement patterns on Yellow Pages advertising. *Journal of Advertising*, 26, 1997. 61-73.
- [12] Albert, W. Do Web Users Actually Look At Ads? A Case Study Of Banner

- Ads And Eye-Tracking Technology. In *Proceedings of the Eleventh Annual Conference of the Usability Professionals' Association*. 2002.
- [13] B. Kroon, S. Maas, S. Boughorbel, and A. Hanjalic, "Eye Localization In Low And Standard Definition Content With Application To Face Matching," *Computer Vision and Image Understanding*, vol. 113, no. 8, pp. 921–933, 2009.
 - [14] Law, B., Atkins, M. S., Kirkpatrick, A. E., and Lomax, A. J. "Eye Gaze Patterns Differentiate Novice And Experts In A Virtual Laparoscopic Surgery Training Environment". In *Proceedings of the Eye Tracking Research and Applications Symposium 2004* (pp.41-48). NY: ACM Press. 2
 - [15] Mello-Thoms, C., Nodine, C. F., and Kundel, H. L. What Attracts The Eye To The Location Of Missed And Reported Breast Cancers? In *Proceedings of the Eye Tracking Research and Applications Symposium 2002* (pp. 111-117). NY: ACM Press.
 - [16] T. Tanaka and S. Tominaga, "Analysis of rotational vertigo using video and image processing," *Proc. - 2011 4th Int. Conf. Biomed. Eng. Informatics, BMEI 2011*, vol. 1, pp. 122–127, 2011.
 - [17] Morimoto, C.H., Mimica, M.R.. Eye gaze tracking techniques for interactive applications. *Computer vision and image understanding* 98, 4–24. 2005
 - [18] Santini, T., Fuhl, W., K'ubler, T., Kasneci, E.,. Bayesian identification of fixations, saccades, and smooth pursuits, in: *Proceedings of the Ninth Biennial ACM Symposium on Eye Tracking Research & Applications*, ACM. pp. 163–170. 2016
 - [19] Hansen DW, Qiang J In the eye of the beholder: A survey of models for eyes and gaze. *Pattern Analysis and Machine Intelligence, IEEE Transactions on* 32: 478–500. 2010
 - [20] "SMI SensoMotoric Instruments iXH." [Online]. Available: <http://www.smivision.com/en/gaze-and-eyetracking-systems/products/>. [Accessed: 23 Januari 2019].
 - [21] Coutinho F, Morimoto C. Improving head movement tolerance of crossratio based eye trackers. *International Journal of Computer Vision* 101: 459-481. 2013
 - [22] D. Zhu, S. T. Moore, and T. Raphan, "Robust and real-time torsional eye position calculation using a template-matching technique," *Computer Methods and Programs in Biomedicine*, vol. 74, no. 3, pp. 201–209, 2004.
 - [23] Leo, M., Cazzato, D., De Marco, T., Distanto, C.: Unsupervised eye pupil localization through differential geometry and local self-similarity matching. *PloS one* 9(8), e102829. 2014.
 - [24] H. Singh and J. Singh, "Human Eye Tracking and Related Issues: A

- Review,” *Int. J. Sci. Res. Publ.*, vol. 2, no. 1, pp. 2250–3153, 2012.
- [25] S. C. Kim, K. C. Nam, W. S. Lee, and D. W. Kim, “A new method for accurate and fast measurement of 3D eye movements,” in *Medical Engineering and Physics*, 2006, vol. 28, no. 1 SPEC. ISS., pp. 82–89.
 - [26] K. Hajari and K. Bhoyar, “A review of issues and challenges in designing Iris recognition Systems for noisy imaging environment,” *Pervas4e Comput. (ICPC), 2015 Int. Conf.*, vol. 0, no. c, pp. 1–6, 2015.
 - [27] D. Zhu, S. T. Moore, and T. Raphan, “Robust pupil center detection using a curvature algorithm,” *Comput. Methods Programs Biomed.*, vol. 59, no. 3, pp. 145–157, 1999
 - [28] I. Lee, B. Choi, and K. S. Park, “Robust measurement of ocular torsion using iterative Lucas-Kanade,” *Computer Methods and Programs in Biomedicine*, vol. 85, no. 3, pp. 238–246, 2007
 - [29] J. K. Y. Ong and T. Haslwanter, “Measuring torsional eye movements by tracking stable iris features,” *Journal of Neuroscience Methods*, vol. 192, no. 2, pp. 261–267, 2010.
 - [30] S. Wibirama and K. Hamamoto, “Development of Gaze Tracking System for Stereoscopic Virtual Environment,” vol. 5, no. 1, pp. 1–8, 2012.
 - [31] C. Topal and C. Akinlar, “An Adaptive Algorithm for Precise Pupil Boundary Detection Using the Entropy of Contour Gradients,” Elsevier, 2013.
 - [32] T. Satriya, S. Wibirama, and I. Ardiyanto, “Robust pupil tracking algorithm based on ellipse fitting,” in *Electronics and Smart Devices (ISESD), International Symposium on*, 2016, pp. 253–257.
 - [33] Shayan, S and A, Dor and B, Arthur and D, Carolien and Schaaf, M.F.. *Eye-Tracking The Emergence Of Attentional Anchors In A Mathematics Learning Tablet Activity*. 166-194. 2016
 - [34] Poole, A and Ball, Linden.”*Eye Tracking In Human-Computer Interaction And Usability Research: Current Status And Future Prospects*”. Encyclopedia of Human Computer Interaction. 211-219. 2006
 - [35] A. T. Duchowski, “A Breadth-First Survey Of Eye-Tracking Applications,” *Behavior research methods, instruments, & computers : a journal of the Psychonomic Society, Inc*, vol. 34, no. 4, pp. 455–470, 2002.
 - [36] Rayner, K. *Eye movements in reading and information processing: 20 years of research. Psychological Bulletin*, 124, 372-422.1998
 - [37] Clarke, J. H. Hierarchical geometric models for visible surface algorithms. *Communications of the ACM*. 1976. 19, 547-554.
 - [38] Loschky, L. C., and McConkie, G. W. User performance with gaze contingent multiresolutional displays. In *Proceedings of the symposium on eye tracking research and applications (ETRA) 2000* (pp. 97-103).New

York: ACM Press.

- [39] Benel, D.C.R., Ottens, D. and Horst, R. Use of an eye tracking system in the usability laboratory. *Proceedings of the Human Factors Society 35th Annual Meeting*. 461-465. Santa Monica, Human Factors and Ergonomics Society. 1991
- [40] Ellis, S., Candrea, R., Misner, J., Craig, C.S., Lankford, C.P., Hutshinson, T.E. Windows to the soul? What eye movements tell us about software usability (pp. 151-178). In *Proceedings of the Usability Professionals' Association Conference 1998*.
- [41] Duchowsky, A.T.: Eye Tracking Methodology: Theory and Practice. Springer, London. 2003
- [42] Young, L. R., and Sheena, D. Survey of Eye Movement Recording Methods. *Behavior Research Methods & Instrumentation*, 7(5), 397–439. 1975.
- [43] Crane, H. D. The Purkinje Image Eyetracker, Image Stabilization, and Related Forms of Stimulus Manipulation. In D. H. Kelly (Ed.), *Visual Science and Engineering: Models and Applications* (pp. 13–89). New York: Marcel Dekker. 1994.
- [44] G, Massimo., S, Maurizio., C, Silvia., D, Tommaso. "A free geometry model-independent neural eye-gaze tracking system". *Journal of NeuroEngineering and Rehabilitation*. 9 (1): 82. 2012
- [45] "Dark and bright pupil tracking" [Online] Available: <https://www.tobiipro.com/learn-and-support/learn/eye-tracking-essentials/what-is-dark-and-bright-pupil-tracking/> [Accessed: 19-Okt-2018].
- [46] D. Li and D. J. Parkhurst, "Starburst : A Robust Algorithm For Video-Based Eye Tracking," *Image (Rochester, N.Y.)*, no. September 2005, p. 22, 2005.
- [47] D. Li, D. Winfield, and D. J. Parkhurst, "Starburst: A Hybrid Algorithm For Video-Based Eye Tracking Combining Feature-Based And Model-Based Approaches," *IEEE Comput. Soc. Conf. Comput. Vis. Pattern Recognit. - Work.*, vol. 3, pp. 79–79, 2005.
- [48] H. Deng, B. Li, Z. Su and Z. Zhuang, "A Robust Algorithm For Distorted Pupil Localization Based On Ellipse Difference And PSO," *2010 3rd International Congress on Image and Signal Processing*, Yantai, 2010, pp. 2478-2482.
- [49] Soltany, M., Zadeh, S.T., and Pourreza, H. Fast and Accurate Pupil Positioning Algorithm using Circular Hough Transform and Gray Projection. *2011 International Conference on Computer Communication and Management Proc .of CSIT vol.5., IACSIT Press, Singapore*. 2011
- [50] N. K. Mahadeo, A. P. Papliński, and S. Ray, "Model-based pupil and iris localization," *Proc. Int. Jt. Conf. Neural Networks*, pp. 10–15, 2012

- [51] W. Zhang, H. Chen, P. Yao, B. Li, and Z. Zhuang, "Precise eye localization with adaboost and fast radial symmetry," in *International Conference on Computational and Information Science*. Springer, 2006, pp. 1068–1077.
- [52] C. Zhang, X. Sun, J. Hu, and W. Deng, "Precise eye localization by fast local linear svm," in *Multimedia and Expo (ICME), 2014 IEEE International Conference on*. IEEE, 2014, pp. 1–6.
- [53] N. Markus, M. Frljak, I. S. Pandzic, J. Ahlberg, and R. Forchheimer, "Eye pupil localization with an ensemble of randomized trees," *Pattern Recognition*, vol. 47, no. 2, pp. 578 – 587, 2014.
- [54] S. Jamaludin, N. Zainal and W. M. D. W. Zaki, "Fast, accurate and memory efficient pupil localization based on piksels properties method," *2015 IEEE 3rd International Conference on Smart Instrumentation, Measurement and Applications (ICSIMA)*, Kuala Lumpur, 2015, pp. 1-6.
- [55] X. Chen, L. Lu, and Y. Gao, "A new concentric circle detection method based on Hough transform," in *Computer Science & Education (ICCSE), 7th International Conference on Melbourne*. pp. 753. 2012
- [56] N. Otsu, "A threshold selection method from gray-level histograms," *IEEE 84 Transactions on Systems, Man, and Cybernetics*, vol. 9, no. 1, pp. 62–66, 1979
- [57] J. Pevsner, Leonardo da Vinci's contributions to neuroscience. *Trends Neurosci.* 25, 217–220. 2002
- [58] Irsch K., Guyton D.L. Eye Features and Anatomy. In: Li S., Jain A. (eds) *Encyclopedia of Biometrics*. Springer, Boston, MA. 2014
- [59] Hickson, Ian. "The Eye" [Online] Available : . <http://academia.hixie.ch/bath/eye/home.html>. [Accessed:10-Oct-2018]
- [60] R. P. Crick and P. T. Khaw, *A textbook of clinical ophthalmology: a practical guide to disorders of the eyes and their management*. World Scientific Publishing Co Inc, 2003.
- [61] N. Kanae, K. Nakamae, H. Fujioka, I. Takao, K. Sekine, and N. Takeda, "Three-Dimensional Eye Movement Simulator Extracting Instantaneous Eye Movement Rotation Axes, The Plane Formed By Rotation Axes, And Innervations For Eye Muscles," *IEICE TRANSACTIONS on Information and Systems*, vol. 86, no. 11, pp. 2452–2462, 2003.
- [62] Majaranta, P, Aoki, H, Donegan, M, Hansen, DW, Hansen, JP, Hyrskykari, A and Räihä, KJ, *Gaze interaction and applications of eye tracking: Advances in assistive technologies*. IGI Global. 2011
- [63] E. Trucco and A. Verri, "Introductory Techniques for 3-D Computer Vision," Prentice Hall PTR January, pp. 343, 1998.
- [64] R. Szeliski, "Computer Vision : Algorithms and Applications," *Computer (Long. Beach. Calif.)*, vol. 5, p. 832, 2010.

- [65] D. Putra, *Pengolahan Citra Digital*. ANDI, 2010
- [66] R. Gonzalez and R. Woods. *Digital Image Processing*, Addison-Wesley Publishing Company, 1992, p 191.
- [67] G. Bradski and A. Kaehler, *Learning OpenCV: Computer Vision with the OpenCV Library*, First Edit., vol. 1. Sebastopol: O'Reilly Media, Inc, 2008.
- [68] Sutoyo. T, Mulyanto. Edy, Suhartono. Vincent, Dwi Nurhayati Oky, Wijanarto, “*Teori Pengolahan Citra Digital* ”, Andi Yogyakarta dan UDINUS Semarang, 2009.
- [69] B, Ahmad. *Pengolahan Citra Digital Menggunakan Visual Basic*. Graha Ilmu: Yogyakarta. 2005.
- [70] P, Eko. *Pengolahan Citra Digital dan Aplikasinya Menggunakan Matlab*. Yogyakarta: Penerbit Andi. 2011.
- [71] Ardi, M. S., Harjoko, A., dan Sumiharto, R. “*Purwarupa Sistem Pendeteksi Garis Landasan Pacu pada Pesawat Terbang*”. Indonesian Journal of Electronics and Instrumentation, Vol. 2, No. 2, Yogyakarta. 2012
- [72] A, Balza., F, Kartika. *Teknik Pengolahan Citra Digital Menggunakan DELPHI*. Yogyakarta : Ardi Publishing. 2005
- [73] Assidiq, A.A.M. K, Othman., Islam, Md and K, Sheroz. *Real Time Lane Detection For Autonomous Vehicles*. 82 - 88. 10.1109/ICCCE.2008.4580573. 2008
- [74] R. Munir, *Pengolahan Citra Digital dengan Pendekatan Algoritmik*. Bandung: Informatika, 2004.
- [75] “Image Thresholding,” 2018. [Online]. Available: http://docs.opencv.org/3.1.0/d7/d4d/tutorial_py_thresholding.html. [Accessed: 1-Oktober-2018].
- [76] Z. F. Khan and G. Nalini Priya, “*Automatic segmentation of retinal blood vessels employing textural Fuzzy C-Means clustering*,” *2016 International Conference on Emerging Technological Trends (ICETT)*. pp. 1–7, 2016.
- [77] C. Solomon and T. Breckon, *Fundamentals of Digital Image Processing*. Wiley-Blackwell, 2011
- [78] Bradski, G. and Kaehler, A. *Learning OpenCV: Computer Vision with the OpenCV Library*. O'Reilly Media, Inc., Sebastopol. 2008
- [79] A. Kadir and A. Susanto, *Pengolahan Citra Teori dan Aplikasi*. 2012
- [80] Jain, Ramesh, *Machine Vision*, McGraw-hill, 1995.
- [81] R. Munir, *Pengolahan Citra Digital dengan Pendekatan Algoritmik*. Bandung: Informatika, 2004.
- [82] Assidiq, A.A.M. K, Othman., Islam, Md and K, Sheroz. *Real Time Lane Detection For Autonomous Vehicles*. 82 - 88.

10.1109/ICCCE.2008.4580573. 2008

- [83] “Canny Edge Detection”. [Online]. Available [http: https://docs.opencv.org/3.4.3](http://docs.opencv.org/3.4.3) [Accessed: 28-Mar-2018]
- [84] R. Duda, P. Hart, ”*Use of the Hough transformation to detect lines and curves in pictures,*” Communication of the ACM, Vol. 15, No. 1, pp.11-15, 1972.
- [85] Chester F. Carlson. Lecture 10: Hough circle transform. Rochester Institute of Technology: Lecture Notes, October 11, 2005.
- [86] Rafael C. Gonzalez and Richard E. Woods. Digital Image Processing. Prentice Hall, 2007.
- [87] Hough Circle Transform. [Online]. Available https://docs.opencv.org/3.1.0/d4/d70/tutorial_Hough_circle.html [Accessed: 28-Mar-2018]
- [88] Nugroho, Sigit. *Dasar-dasar Metode Statistika*. Jakarta: Grasindo. 2007.
- [89] T. Satriya, S. Wibirama, I. Ardiyanto “Pengembangan Sistem *Robust Torsional Eye Tracking* dengan Menggunakan Metode *Ellipse Fitting* dan Lucas-Kanade”. Yogyakarta : Universitas Gadjah Mada. 2017
- [90] “CASIA Iris Database.” [Online]. Available: <http://biometrics.idealtest.org/dbDetailForUser.do?id=4>. [Accessed: 20-Jan-2017].
- [91] “Point of Gaze (PoG) Eye Tracking Dataset.” [Online]. Available: <http://heracleia.uta.edu/~mcmurrough/eyetracking/>. [Accessed: 12-Nov-2017].