

REFERENCES

- Glinsky, Albert. (2000). *Theremin : ether music and espionage*. Urbana: University of Illinois Press. pp. 46–47. ISBN 0252025822. OCLC 43286443
- Staughton, J. (2020, October 21). Why Is The Quality Of CCTV Footage Still So Low?? ScienceABC. <https://www.scienceabc.com/eyeopeners/why-is-the-quality-of-cctv-footage-still-so-low.html>
- W.-K. Chen, *Linear Networks and Systems (Book style)*. Belmont, CA: Wadsworth, 1993, pp. 123–135.
- M. Turk, A. Pentland, “Eigenfaces for Recognition”, *Journal of Cognitive Neuroscience*, pp.71-86, 1991
- Y. Woo, C. Yi and Y. Yi, "Fast PCA-based face recognition on GPUs," 2013 IEEE International Conference on Acoustics, Speech and Signal Processing, 2013, pp. 2659-2663, doi: 10.1109/ICASSP.2013.6638138.
- L. I. Smith, “A Tutorial on Principal Components Analysis”, http://www.cs.otago.ac.nz/cosc453/student_tutorials/principal_components.pdf, 2009
- Bronstein, I. N. and Semendyayev, K. A. *Handbook of Mathematics*, 3rd ed. New York: Springer-Verlag, p. 892, 1997.
- C. J. Kaufman, Rocky Mountain Research Lab., Boulder, CO, private communication, May 1995.
- “CUDA C Programming Guide version 4.1”, pp. 98-100
- Y. Woo, C. Yi and Y. Yi, "Fast PCA-based face recognition on GPUs," 2013 IEEE International Conference on Acoustics, Speech and Signal Processing, 2013, pp. 2659-2663, doi: 10.1109/ICASSP.2013.6638138.
- D. Wilson and A. Sutton, "Open-Street CCTV in Australia," *Australian Institute of Criminology, Trends and Issues in Crime and Criminal Justice*, 2003.
- F. M. Donald, & Donald, C.H.M. , "Task disengagement and implications for vigilance performance in CCTV surveillance" *Cognition Technology and Work*, vol. 17, pp. 121-130, 2015
- A. Isnard, "Can Surveillance Cameras be Successful in Preventing Crime and Controlling Anti-Social Behaviours," presented at the The Character, Impact and Prevention of Crime in Regional Australia Conference, Townsville, Queensland Australia, 2001.
- S. J. Ahn, J. Bailenson, J. Fox, and M. Jabon, "Using Automated Facial Expression Analysis for Emotion and Behavior Prediction," In: *Handbook of Emotions and Mass Media*, K. Doeveling, C. von Scheve, and E. A. Konjin, (Eds.), London/New York: Routledge, 2010, pp. 349-369.
- C. P. Sumanthi, Santhanam, T. & Mahadevi, M. , "Automatic Facial Expression Analysis: A Survey," *International Journal of Computer Science & Engineering Survey*, vol. 3, pp. 47-59, 2012.

- A. Sanchez, J. V. Ruiz, M. A.B., A. S. Montemayor, J. Hernandez, and J. J. Pantrigo, "Differential Optical Flow Applied to Automatic Facial Expression Recognition," *Neurocomputing*, vol. 74, pp. 1272-1282, 2011.
- A. Psaltis, "Optical Flow for Dynamic Facial Expression Recognition," Master, Faculty of Science, Utrecht University 2013.
- A. Besinger, T. Sztynka, S. Lal, C. J. Duthoit, J. I. Agbinya, B. Jap, et al., "Optical Flow Based Analyses to Detect Emotion From Human Facial Image Data," *Expert Systems with Applications*, 2010. doi: 10.1016/j.eswa.2010.05.063.
- F. Zhang, Gao, Y., Bakos, & J.D., "Lucas-Kanade Optical Flow Estimation on the TI C66x Digital Signal Processor," *IEEE High Performance Extreme Computing Conference (HPEC)*, pp. 1-6, 2014.
- B. D. Lucas and T. Kanade, "An Iterative Image Registration Technique with an Application to Stereo Vision," presented at the Proceedings of the 7th Joint Conference on Ar
- D. Patel and S. Upadhyay, "Optical Flow Measurement Using Lucas Kanade Method," *International Journal of Computer Applications*, vol. 61, pp. 6-10, 2013.
- T. Kanade, J. Cohn, and Y. L. Tian, "Comprehensive Database for Facial Expression Analysis," *Proceedings of the 4th IEEE International Conference on Automatic Face and Gesture Recognition*, pp. 46-53, 2000.
- Scalestatistics. "Greenhouse-Geisser." Scalestatistics, <https://www.scalestatistics.com/greenhouse-geisser.html>
- L. Sidavong, S. Lal and T. Sztynka, "Spontaneous facial expression analysis using optical flow," 2017 Eleventh International Conference on Sensing Technology (ICST), 2017, pp. 1-6, doi: 10.1109/ICSensT.2017.8304482.
- H. W. Sino, Indrabayu and I. S. Areni, "Face Recognition of Low-Resolution Video Using Gabor Filter & Adaptive Histogram Equalization," 2019 International Conference of Artificial Intelligence and Information Technology (ICAIIIT), 2019, pp. 417-421, doi: 10.1109/ICAIIIT.2019.8834558.
- M. Nehru and S. Padmavathi, "Illumination invariant face detection using viola jones algorithm," in 2017 4th International Conference on Advanced Computing and Communication Systems (ICACCS), Coimbatore, India, 2017, pp. 1-4.
- Mujtaba, Hussain. "Face Detection using Viola Jones Algorithm." *Great Learning*, 2 September 2020, <https://www.mygreatlearning.com/blog/viola-jones-algorithm/>
- Aakarsh Malhotra, Anush Sankaran, Apoorva Mittal, Mayank Vatsa, Richa Singh, "Human Recognition in Unconstrained Environments", 2017, pp. 119-144
- Meijing Li, X. Yu, K. H. Ryu, S. Lee, and N. TheeraUmpon, "Face recognition technology development with Gabor, PCA and SVM methodology under illumination normalization condition," *Clust. Comput.*, vol. 21, no. 1, pp. 1117-1126, Mar. 2018.
- L. Shen, H. Wang, L. D. Xu, X. Ma, S. Chaudhry, and W. He, "Identity management based on PCA and SVM," *Inf. Syst. Front.*, vol. 18, no. 4, pp. 711-716, Aug. 2016.

- Indrabayu, R. A. Tacok, and I. S. Areni, "Modification on Brightness Enhancement for Simple Thresholding in Eyelid Area Measurement," in Proceedings of the 6th International Conference on Bioinformatics and Biomedical Science - ICBBS '17, Singapore, Singapore, 2017, pp. 101–104.
- Institute of Electrical and Electronics Engineers and IEEE Control Systems Society, Eds., 2014 IEEE International Conference on Control System, Computing and Engineering (ICCSCE 2014): [Batu Ferringhi], Penang, Malaysia, 28 - 30 November 2014. Piscataway, NJ: IEEE, 2014.
- P. V. Bankar and A. C. Pise, "Face recognition by using Gabor and LBP," in 2015 International Conference on Communications and Signal Processing (ICCSP), Melmaruvathur, India, 2015, pp. 0045–0048.
- Jun Qin and Zhong-Shi He, "A SVM face recognition method based on Gabor-featured key points," in 2005 International Conference on Machine Learning and Cybernetics, Guangzhou, China, 2005, p. 5144–5149 Vol. 8.
- Cambridge. "Digital Image Interpolation." Cambridge in Colour, <https://www.cambridgeincolour.com/tutorials/image-interpolation.htm>.
- S. Muniyappan, A. Allirani, and S. Saraswathi, "A novel approach for image enhancement by using contrast limited adaptive histogram equalization method," in 2013 Fourth International Conference on Computing, Communications and Networking Technologies (ICCCNT), Tiruchengode, 2013, pp. 1–6
- S. M. Pizer et al., "Adaptive histogram equalization and its variations," *Comput. Vis. Graph. Image Process.*, vol. 39, no. 3, pp. 355–368, Sep. 1987.
- S. Singh and F. Nasoz, "Facial Expression Recognition with Convolutional Neural Networks," 2020 10th Annual Computing and Communication Workshop and Conference (CCWC), 2020, pp. 0324-0328, doi: 10.1109/CCWC47524.2020.9031283.
- C. Pramerdorfer and M. Kampel, "Facial expression recognition using convolutional neural networks: State of the art," arXiv preprint arXiv:1612.02903, 2016.
- B.-K. Kim, S.-Y. Dong, J. Roh, G. Kim, and S.-Y. Lee, "Fusing aligned and non-aligned face information for automatic affect recognition in the wild: A deep learning approach," in Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition Workshops, 2016, pp. 48–57.
- Z. Zhang, P. Luo, C.-C. Loy, and X. Tang, "Learning Social Relation Traits from Face Images," in Proc. IEEE Int. Conference on Computer Vision (ICCV), 2015, pp. 3631–3639.
- "Challenges in Representation Learning: A report on three machine learning contests." I Goodfellow, D Erhan, PL Carrier, A Courville, M Mirza, B Hamner, W Cukierski, Y Tang, DH Lee, Y Zhou, C Ramaiah, F Feng, R Li, X Wang, D Athanasakis, J Shawe-Taylor, M Milakov, J Park, R Ionescu, M Popescu, C Grozea, J Bergstra, J Xie, L Romaszko, B Xu, Z Chuang, and Y. Bengio. arXiv 2013.

- C. Sagonas, E. Antonakos, G. Tzimiropoulos, S. Zafeiriou, M. Pantic. 300 faces In-the-wild challenge: Database and results. *Image and Vision Computing (IMAVIS), Special Issue on Facial Landmark Localisation "In-The-Wild"*. 2016.
- C. Sagonas, G. Tzimiropoulos, S. Zafeiriou, M. Pantic. A semiautomatic methodology for facial landmark annotation. *Proceedings of IEEE Int'l Conf. Computer Vision and Pattern Recognition (CVPRW), 5th Workshop on Analysis and Modeling of Faces and Gestures (AMFG 2013)*. Oregon, USA, June 2013.
- C. Sagonas, G. Tzimiropoulos, S. Zafeiriou, M. Pantic. 300 Faces inthe-Wild Challenge: The first facial landmark localization Challenge. *Proceedings of IEEE Int'l Conf. on Computer Vision (ICCV-W), 300 Faces in-the-Wild Challenge (300-W)*. Sydney, Australia, December 2013.
- Minaee, S. (2019, February 4). Deep-Emotion: Facial Expression Recognition Using Attentional Convolutional Network. <https://arxiv.org/pdf/1902.01019.pdf>
- L. Pham, H. Vu, T. A. Tran, "Facial Expression Recognition Using Residual Masking Network", *IEEE 25th International Conference on Pattern Recognition, 2020*, 4513-4519. Milan -Italia.
- Isakova, T. (2020, October 11). Benefits of AI facial expression recognition. *InData Labs*. <https://indatalabs.com/blog/ai-facial-expression-recognition>
- Pedamkar, P. (2019). Overfitting Neural Network | What is Overfitting in Deep Neural Network? *eduCBA*. <https://www.educba.com/overfitting-neural-network/>
- Isahit. (2022, August 4). Why to use Grayscale Conversion during Image Processing? *Isahit*. <https://www.isahit.com/blog/why-to-use-grayscale-conversion-during-image-processing>
- Pexels. (n.d.). Baseball Training Free Stock Video Footage, Royalty-Free. *Pexels*. <https://www.pexels.com/video/baseball-training-852399/>
- Peng, Y. (2019). Face recognition at a distance: low-resolution and alignment problems. https://ris.utwente.nl/ws/portalfiles/portal/93563250/thesis_Yuxi_Peng.pdf
-