

DAFTAR PUSTAKA

- [1] WHO, “Cervical cancer,” 3 2024. [Online]. Available: <https://www.who.int/news-room/fact-sheets/detail/cervical-cancer>
- [2] —, “Global cancer burden growing, amidst mounting need for services,” 2 2024. [Online]. Available: <https://www.who.int/news/item/01-02-2024-global-cancer-burden-growing--amidst-mounting-need-for-services>
- [3] V. G. Mendagudli and S. S. Sarawad, “Cervical cancer-an overview,” *International Journal of Creative Research Thoughts*, vol. 9, pp. 2320–2882, 4 2021. [Online]. Available: www.ijcrt.org
- [4] R. B. Perkins, N. Wentzensen, R. S. Guido, and M. Schiffman, “Cervical cancer screening: A review,” *JAMA*, vol. 330, no. 6, pp. 547–558, 08 2023. [Online]. Available: <https://doi.org/10.1001/jama.2023.13174>
- [5] P. A. Cohen, A. Jhingran, A. Oaknin, and L. Denny, “Cervical cancer,” *The Lancet*, vol. 393, pp. 169–182, 1 2019.
- [6] WHO, *WHO guideline for screening and treatment of cervical pre-cancer lesions for cervical cancer prevention : use of dual-stain cytology to triage women after a positive test for human papillomavirus (HPV)*, 2nd ed. World Health Organization, 2024.
- [7] M. Kamal, “Pap smear collection and preparation: Key points,” *Cytojournal*, vol. 19, p. 24, 3 2022.
- [8] S. Dasgupta, “The efficiency of cervical pap and comparison of conventional pap smear and liquid-based cytology: a review,” *Cureus*, vol. 15, no. 11, 2023.
- [9] T. Vaiyapuri, H. Alaskar, L. Syed, E. Aljohani, A. Alkhayyat, K. Shankar, and S. Kumar, “Modified metaheuristics with stacked sparse denoising autoencoder model for cervical cancer classification,” *Computers and Electrical Engineering*, vol. 103, p. 108292, 10 2022.
- [10] H.-P. Tang, D. Cai, Y.-Q. Kong, H. Ye, Z.-X. Ma, H.-S. Lv, L.-R. Tuo, Q.-J. Pan, Z.-H. Liu, and X. Han, “Cervical cytology screening facilitated by an artificial intelligence microscope: a preliminary study,” *Cancer cytopathology*, vol. 129, no. 9, pp. 693–700, 2021.
- [11] X. Hou, G. Shen, L. Zhou, Y. Li, T. Wang, and X. Ma, “Artificial intelligence in cervical cancer screening and diagnosis,” *Frontiers in Oncology*, vol. 12, 3 2022.
- [12] S. Firuzinia, S. M. Afzali, F. Ghasemian, and S. A. Mirroshandel, “A robust deep learning-based multiclass segmentation method for analyzing human metaphase ii oocyte images,” *Computer Methods and Programs in Biomedicine*, vol. 201, p. 105946, 4 2021.
- [13] M. Kalbhor, S. Shinde, P. Wajire, and H. Jude, “Cervicell-detector: An object detection approach for identifying the cancerous cells in pap smear images of cervical cancer,” *Heliyon*, vol. 9, p. e22324, 11 2023.

- [14] R. Varghese and S. M., “Yolov8: A novel object detection algorithm with enhanced performance and robustness,” in *2024 International Conference on Advances in Data Engineering and Intelligent Computing Systems (ADICS)*. IEEE, 4 2024, pp. 1–6.
- [15] K. He, X. Zhang, S. Ren, and J. Sun, “Deep residual learning for image recognition,” in *Proceedings of the IEEE conference on computer vision and pattern recognition*, 2016, pp. 770–778.
- [16] M. A. Pangarkar, “The bethesda system for reporting cervical cytology,” *Cytojournal*, vol. 19, p. 28, 4 2022.
- [17] A. Bharadwaj and A. Dubey, “Cervical cancer detection using deep learning on liquid-based cytology pap smear images,” in *2024 IEEE International Conference on Artificial Intelligence in Engineering and Technology (IICAJET)*. IEEE, 2024, pp. 568–573.
- [18] W. William, A. Ware, A. H. Basaza-Ejiri, and J. Obungoloch, “A pap-smear analysis tool (pat) for detection of cervical cancer from pap-smear images,” *Biomedical engineering online*, vol. 18, pp. 1–22, 2019.
- [19] L. Cao, J. Yang, Z. Rong, L. Li, B. Xia, C. You, G. Lou, L. Jiang, C. Du, H. Meng *et al.*, “A novel attention-guided convolutional network for the detection of abnormal cervical cells in cervical cancer screening,” *Medical image analysis*, vol. 73, p. 102197, 2021.
- [20] X. Li, Z. Xu, X. Shen, Y. Zhou, B. Xiao, and T.-Q. Li, “Detection of cervical cancer cells in whole slide images using deformable and global context aware faster rcnn-fpn,” *Current Oncology*, vol. 28, no. 5, pp. 3585–3601, 2021.
- [21] M. Xia, G. Zhang, C. Mu, B. Guan, and M. Wang, “Cervical cancer cell detection based on deep convolutional neural network,” in *2020 39th Chinese Control Conference (CCC)*. IEEE, 2020, pp. 6527–6532.
- [22] A. Goswami, N. G. Goswami, and N. Sampathila, “Deep learning-based classification of cervical cancer using pap smear images,” in *2023 4th International Conference on Intelligent Technologies (CONIT)*. IEEE, 2024, pp. 1–6.
- [23] D. N. Diniz, M. T. Rezende, A. GC Bianchi, C. M. Carneiro, E. JS Luz, G. JP Moreira, D. M. Ushizima, F. NS de Medeiros, and M. JF Souza, “A deep learning ensemble method to assist cytopathologists in pap test image classification,” *Journal of Imaging*, vol. 7, no. 7, p. 111, 2021.
- [24] M. A. Oyervides-Muñoz, A. A. Pérez-Maya, H. F. Rodríguez-Gutiérrez, G. S. Gómez-Macias, O. R. Fajardo-Ramírez, V. Treviño, H. A. Barrera-Saldaña, and M. L. Garza-Rodríguez, “Understanding the hpv integration and its progression to cervical cancer,” *Infection, Genetics and Evolution*, vol. 61, pp. 134–144, 2018.
- [25] S. D. Balasubramaniam, V. Balakrishnan, C. E. Oon, and G. Kaur, “Key molecular events in cervical cancer development,” *Medicina*, vol. 55, p. 384, 7 2019.

- [26] S. L. Bedell, L. S. Goldstein, A. R. Goldstein, and A. T. Goldstein, "Cervical cancer screening: past, present, and future," *Sexual medicine reviews*, vol. 8, no. 1, pp. 28–37, 2020.
- [27] N. H. C. of the PRC, "National guidelines for diagnosis and treatment of cervical cancer 2022 in china (english version)," *Chinese Journal of Cancer Research*, vol. 34, pp. 256–269, 2022.
- [28] N. Bhatla, J. S. Berek, M. C. Fredes, L. A. Denny, S. Grenman, K. Karunaratne, S. T. Kehoe, I. Konishi, A. B. Olawaiye, J. Prat, and R. Sankaranarayanan, "Revised figo staging for carcinoma of the cervix uteri," *International Journal of Gynecology & Obstetrics*, vol. 145, pp. 129–135, 4 2019.
- [29] C. M. Rerucha, R. J. Caro, and V. L. Wheeler, "Cervical cancer screening," *American family physician*, vol. 97, no. 7, pp. 441–448, 2018.
- [30] A. C. Testa, A. Di Legge, I. De Blasis, M. C. Moruzzi, M. Bonatti, A. Collarino, V. Rufini, and R. Manfredi, "Imaging techniques for the evaluation of cervical cancer," *Best practice & research Clinical obstetrics & gynaecology*, vol. 28, no. 5, pp. 741–768, 2014.
- [31] V. Mehta, V. Vasanth, and C. Balachandran, "Pap smear," *Indian Journal of Dermatology, Venereology and Leprology*, vol. 75, p. 214, 2009.
- [32] F. L. Kitchen and C. M. Cox, *Papanicolaou Smear*, 2025.
- [33] N. J. Nilson, "Introduction to machine learning," *AN EARLY DRAFT OF A PROPOSED TEXTBOOK. Robotics Laboratory. Department of Computer Science Stanford University. Stanford. USA. Recuperado De: [Http://Ai. Stanford. Edu/~ Nilsson/MLBOOK. Pdf](http://Ai.Stanford.Edu/~Nilsson/MLBOOK.Pdf)*, 1998.
- [34] M. Mohammed, M. Khan, and E. Bashier, *Machine Learning: Algorithms and Applications*, 07 2016.
- [35] P. Cunningham, M. Cord, and S. J. Delany, *Supervised Learning*. Berlin, Heidelberg: Springer Berlin Heidelberg, 2008, pp. 21–49. [Online]. Available: https://doi.org/10.1007/978-3-540-75171-7_2
- [36] G. James, D. Witten, T. Hastie, R. Tibshirani, and J. Taylor, *Unsupervised Learning*, 2023, pp. 503–556.
- [37] P. Y C a, V. Pulabaigari, and E. B, "Semi-supervised learning: a brief review," *International Journal of Engineering & Technology*, vol. 7, p. 81, 02 2018.
- [38] M. A. Wiering and M. Van Otterlo, "Reinforcement learning," *Adaptation, learning, and optimization*, vol. 12, no. 3, p. 729, 2012.
- [39] Y. LeCun, Y. Bengio, and G. Hinton, "Deep learning," *nature*, vol. 521, no. 7553, pp. 436–444, 2015.
- [40] A. Mathew, P. Amudha, and S. Sivakumari, "Deep learning techniques: an overview," *Advanced Machine Learning Technologies and Applications: Proceedings of AMLTA 2020*, pp. 599–608, 2021.

- [41] Y. Amit, *2D object detection and recognition: Models, algorithms, and networks*. MIT Press, 2002.
- [42] M. Trigka and E. Dritsas, “A comprehensive survey of machine learning techniques and models for object detection,” *Sensors*, vol. 25, p. 214, 1 2025.
- [43] M. Vashisht and B. Kumar, “A survey paper on object detection methods in image processing,” in *2020 International Conference on Computer Science, Engineering and Applications (ICCSEA)*. IEEE, 2020, pp. 1–4.
- [44] Y. Zhang, X. Li, F. Wang, B. Wei, and L. Li, “A comprehensive review of one-stage networks for object detection,” in *2021 IEEE International Conference on Signal Processing, Communications and Computing (ICSPCC)*. IEEE, 2021, pp. 1–6.
- [45] L. Du, R. Zhang, and X. Wang, “Overview of two-stage object detection algorithms,” in *Journal of Physics: Conference Series*, vol. 1544, no. 1. IOP Publishing, 2020, p. 012033.
- [46] J. Redmon and A. Farhadi, “Yolo9000: better, faster, stronger,” in *Proceedings of the IEEE conference on computer vision and pattern recognition*, 2017, pp. 7263–7271.
- [47] A. Bochkovskiy, C.-Y. Wang, and H.-Y. M. Liao, “Yolov4: Optimal speed and accuracy of object detection,” *arXiv preprint arXiv:2004.10934*, 2020.
- [48] K. He, X. Zhang, S. Ren, and J. Sun, “Spatial pyramid pooling in deep convolutional networks for visual recognition,” *IEEE transactions on pattern analysis and machine intelligence*, vol. 37, no. 9, pp. 1904–1916, 2015.
- [49] M. Sohan, T. Sai Ram, and C. V. Rami Reddy, “A review on yolov8 and its advancements,” in *International Conference on Data Intelligence and Cognitive Informatics*. Springer, 2024, pp. 529–545.
- [50] G. Jocher, A. Chaurasia, and J. Qiu, “Ultralytics yolov8,” 2023. [Online]. Available: <https://github.com/ultralytics/ultralytics>
- [51] C.-Y. Wang, A. Bochkovskiy, and H.-Y. M. Liao, “Yolov7: Trainable bag-of-freebies sets new state-of-the-art for real-time object detectors,” in *Proceedings of the IEEE/CVF conference on computer vision and pattern recognition*, 2023, pp. 7464–7475.
- [52] G. Jocher, A. Chaurasia, Laughing, J. Fang, A. Stoken, A. V, and other contributors, “Yolov5 by ultralytics,” <https://github.com/ultralytics/yolov5>, 2020, accessed: 2025-07-10.
- [53] S. Ren, K. He, R. Girshick, and J. Sun, “Faster r-cnn: Towards real-time object detection with region proposal networks,” *Advances in neural information processing systems*, vol. 28, 2015.
- [54] W. Liu, D. Anguelov, D. Erhan, C. Szegedy, S. Reed, C.-Y. Fu, and A. C. Berg, “Ssd: Single shot multibox detector,” in *Computer Vision—ECCV 2016: 14th European Conference, Amsterdam, The Netherlands, October 11–14, 2016, Proceedings, Part I 14*. Springer, 2016, pp. 21–37.

- [55] Z. Zheng, P. Wang, W. Liu, J. Li, R. Ye, and D. Ren, "Distance-iou loss: Faster and better learning for bounding box regression," in *Proceedings of the AAAI conference on artificial intelligence*, vol. 34, no. 07, 2020, pp. 12 993–13 000.
- [56] Y. Bengio, I. Goodfellow, A. Courville *et al.*, *Deep learning*. MIT press Cambridge, MA, USA, 2017, vol. 1.
- [57] C. M. Bishop and N. M. Nasrabadi, *Pattern recognition and machine learning*. Springer, 2006, vol. 4, no. 4.
- [58] J. Redmon, S. Divvala, R. Girshick, and A. Farhadi, "You only look once: Unified, real-time object detection," in *Proceedings of the IEEE conference on computer vision and pattern recognition*, 2016, pp. 779–788.
- [59] V. Nair and G. E. Hinton, "Rectified linear units improve restricted boltzmann machines," in *Proceedings of the 27th international conference on machine learning (ICML-10)*, 2010, pp. 807–814.
- [60] K. Simonyan and A. Zisserman, "Very deep convolutional networks for large-scale image recognition," *arXiv preprint arXiv:1409.1556*, 2014.
- [61] M. Sandler, A. Howard, M. Zhu, A. Zhmoginov, and L.-C. Chen, "Mobilenetv2: Inverted residuals and linear bottlenecks," in *Proceedings of the IEEE conference on computer vision and pattern recognition*, 2018, pp. 4510–4520.
- [62] G. Huang, Z. Liu, L. Van Der Maaten, and K. Q. Weinberger, "Densely connected convolutional networks," in *Proceedings of the IEEE conference on computer vision and pattern recognition*, 2017, pp. 4700–4708.
- [63] D. Hoiem, S. K. Divvala, and J. H. Hays, "Pascal voc 2008 challenge," *World Literature Today*, vol. 24, no. 1, pp. 1–4, 2009.
- [64] T.-Y. Lin, M. Maire, S. Belongie, J. Hays, P. Perona, D. Ramanan, P. Dollár, and C. L. Zitnick, "Microsoft coco: Common objects in context," in *Computer vision—ECCV 2014: 13th European conference, zurich, Switzerland, September 6-12, 2014, proceedings, part v 13*. Springer, 2014, pp. 740–755.
- [65] B. Dwyer, J. Nelson, T. Hansen, and et al., "Roboflow (version 1.0)," 2024. [Online]. Available: <https://roboflow.com>
- [66] M. T. Rezende, R. Silva, F. de O. Bernardo, A. H. G. Tobias, P. H. C. Oliveira, T. M. Machado, C. S. Costa, F. N. S. Medeiros, D. M. Ushizima, C. M. Carneiro, and A. G. C. Bianchi, "Cric searchable image database as a public platform for conventional pap smear cytology data," *Scientific Data*, vol. 8, p. 151, 6 2021.
- [67] J. Deng, W. Dong, R. Socher, L.-J. Li, K. Li, and L. Fei-Fei, "Imagenet: A large-scale hierarchical image database," in *2009 IEEE Conference on Computer Vision and Pattern Recognition*, 2009, pp. 248–255.